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February 15, 2012

The Honorable Jerry Brown  
Governor, State of California

The Honorable Members of the California Legislature

The Board of Administration of the California Public Employees' Retirement System (CalPERS) has, pursuant to Government Code Section 20233, completed its thirty-fourth annual evaluation of the extent to which the purpose of Government Code Section 21310 is being achieved. Section 21310 provides:

"It is the purpose of the Legislature in enacting this article to provide for the preservation of the purchasing power of benefits under the Public Employees' Retirement Law through a system of adjustments in benefits based on changes in living costs."

The Board has historically sought, and continues to recommend, legislation to preserve the purchasing power of benefits under the Public Employees' Retirement Law.

Respectfully,

ROB FECKNER, President  
Board of Administration



# Report

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**California Public Employees' Retirement System  
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## **2011 Cost-of-Living Report**

California Public Employees' Retirement System  
2011 Cost-of-Living Report

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## Summary

The annual rate of inflation, as measured by the percentage change in the Consumer Price Index (CPI-U) rose 3.2 percent in 2011 after a 1.6 percent increase in 2010. Over the last 20 years, the inflation rate has averaged 2.5 percent and the long term (1962 to 2011) inflation rate has averaged 4.0 percent. Given the current plan provisions and the level of inflation noted above, the vast majority of retirees suffered a loss of about 1.2 percent of their purchasing power. The remaining members suffered minimal to no loss of purchasing power.

Cost-of-living (COLA) adjustments are limited to the lesser of two compounded numbers - the rate of inflation or the cost-of-living adjustment contracted by the employer. In 2009 and 2010, the inflation was less than 2% and as a result many of the retirees subject to the 2% COLA provision received increases of less than 2%. In 2012, these retirees will be receiving an increase above 2% in accordance with the law. For the 2012 COLA adjustments, the impact of inflation will result in the following increases:

### COLA Increases in May 2012 for Retirees by Year of Retirement

<b>COLA Provision</b>	<b>Year of Retirement</b>	<b>% COLA Increase Effective May 1, 2012</b>
2% COLA	2005 & Earlier	2.0%
	2006	2.1%
	2007	2.9%
	2008	3.2%
	2009	2.4%
	2010	2.0%
	2011	Not Eligible
3% COLA	1981 & Earlier	3.0%
	1982 to 2009	3.2%
	2010	3.0%
	2011	Not Eligible
4% COLA	1976 & Earlier	4.0%
	1977 to 2010	3.2%
	2011	Not Eligible
5% COLA	2010 & Earlier	3.2%
	2011	Not Eligible

Retirees currently subject to a 3%, 4% or 5% COLA represent less than 5% of all CalPERS retirees.

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### **Introduction**

The primary goal of a defined benefit retirement plan is to replace a portion of an individual's income in such a manner as to enable the retiree to meet a portion of his or her living expenses from the plan. To mitigate the effects of inflation on the pension, many retirement systems provide automatic or ad hoc cost-of-living adjustments (COLAs). Without such increases, even at today's moderate rate of inflation, the value of a pension after several years of retirement could be far less than its value at the time of retirement. This report describes the structure currently in place to help preserve the value of retiree allowances, and the extent to which the value of the allowances has been eroded by inflation. The increases required to restore the original purchasing power of those allowances are presented in Exhibits D, F, and H.

### **Purpose of the Report**

This report is presented in response to Section 20233 of the Public Employees' Retirement Law (PERL) entitled: "Annual Report – Supplementary Increases", which reads:

"The board shall report to the Governor and the Legislature, not later than December 1 of each year, on the extent to which the purpose of Section 21310 is being achieved under the provisions of this article and Article 2 (commencing with Section 20096) and the amount of supplementary increases in retirement allowances required to meet the objective of preserving the purchasing power of benefits provided by the system. The board shall also determine and report on the increase in the state contribution rate required to provide the supplementary increases for state members, other than school members."

Article 3 of Chapter 13 of the PERL, entitled "Cost-Of-Living Adjustments", Section 21310 states its purpose as follows: "It is the purpose of the Legislature in enacting this article to provide for the preservation of the purchasing power of benefits under the Public Employees' Retirement Law through a system of adjustments in benefits based on changes in living costs."

The intention of this report is to determine the extent to which the purchasing power of benefits has been preserved, and to provide a base of knowledge from which the Governor, the Legislature and others, can make informed decisions.

### **Description of CalPERS Cost-of-Living Benefit Structure**

The basic structure of the retirement cost of living adjustment (COLA) increases at CalPERS includes: annually scheduled cost-of-living increases, ad hoc increases, and purchasing power protection allowance (PPPA) benefit increases.

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### ***Annual Cost-of-Living Increases***

The Retirement Law provides for the payment of an annual COLA to be paid each May beginning the second year after retirement begins. Cost-of-living adjustments (COLA) are limited to the lesser of two compounded numbers - the rate of inflation or the cost-of-living adjustment contracted by the employer. Currently, State and Schools retiree allowances are limited to a cumulative increase of 2 percent (compounded) annually. Second Tier State Miscellaneous and Second Tier State Industrial retirees and survivors receive an annual COLA of 3 percent, compounded, but not limited by inflation. Contracting agencies provide increases of 2, 3, 4 or 5 percent (also limited to the cumulative increase in the consumer price index).

Each year, a compounded percentage is applied against a figure referred to as the **base allowance**. The base allowance is generally the gross amount received at the time of retirement.

To determine the applicable COLA that applies to the original pension benefit, CalPERS calculates and applies the lesser of two compounded numbers (the factor percentage), the actual rate of inflation (based on the All Urban Consumer Price Index, 1967 Base Year) and the COLA percentage (2%, 3%, 4% or 5%) that the employer has in contract with CalPERS. The COLA for the current year is the current year's original pension with the factor percentage over last year's original pension with last year's factor percentage but never less than zero. Members receive this adjustment, if any, on their May 1st warrant each year starting the second calendar year of retirement.

The following chart details the year by year comparison that is made for a member receiving a 2% adjustment. In this example our member retired in 1998 with a base allowance of \$1,000. The member becomes eligible to receive a COLA adjustment in the year 2000.

YEAR	2% COLA	2% COLA COMPOUNDED	INFLATION FROM PRIOR YEAR	INFLATION COMPOUNDED
2000	2.00%	2.00%	2.19%	2.19%
2001	2.00%	4.04%	3.37%	5.63%
2002	2.00%	6.12%	2.83%	8.62%
2003	2.00%	8.24%	1.58%	10.34%
2004	2.00%	10.41%	2.28%	12.86%
2005	2.00%	12.62%	2.67%	15.87%
2006	2.00%	14.87%	3.39%	19.80%
2007	2.00%	17.17%	3.23%	23.67%
2008	2.00%	19.51%	2.85%	27.19%
2009	2.00%	21.90%	3.84%	32.07%
2010	2.00%	24.34%	-0.36%	31.60%
2011	2.00%	26.82%	1.64%	33.76%
2012	2.00%	29.36%	3.20%	38.04%

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Here's the mechanics of the math on the calculation of the 2012 cost-of-living adjustment using an inflation rate of 3.20%.

Base Allowance x COLA Factor	= New COLA
\$1,000.00 x 0.2936 or 29.36%	= \$293.60

Base Allowance + New COLA	= Gross Allowance
\$1,000.00 + \$293.60	= \$1,293.60

The procedure is the same every year. Charts are reviewed, CalPERS then takes the lesser of the two compounded figures in any year, and multiplies the lesser figure by the base to arrive at the cost-of-living adjustment for that year.

### ***Ad Hoc Cost-of-Living Increases***

In addition to the automatic COLAs, the Legislature has periodically authorized permanent ad hoc COLAs; monthly supplemental payments made when the allowance falls below 75 percent of purchasing power.

The 1-6% ad hoc increase provided for in SB 400 (G.C. 21328) was implemented differently from other ad hoc increases in the past. In other ad-hoc increases, the increase affected the "floor" of protection that was afforded by the PPPA program. The 1-6% ad hoc was different. It provided that the PPPA payments were not to be reduced as a result of this ad hoc. This meant that the pensions paid to retired members who benefited from this ad hoc will always be greater than they would have been had this ad hoc not occurred. There is no possibility that the increase will be "taken away" by the ongoing increases in the PPPA benefit.

Inherent in the above approach is that future increases in the PPPA protection level will not impact the 1-6% ad hoc increase. To be consistent with this approach and hence the intention of the legislature, the supplemental COLA increases required to provide full inflation protection (shown in Exhibits D and F) have not been adjusted to reflect the 1-6% ad hoc increase.

### ***Purchasing Power Protection Allowance (PPPA) Increases***

The PPPA benefit is a supplementary cost-of-living benefit provided to retirees when the purchasing power of their benefit falls below minimum levels established by law.

Eligibility to receive the PPPA benefit is based on year of retirement, cost-of-living adjustments (COLAs), one-time increases, and declining purchasing power measured by the United States City Average Consumer Price Index (CPI-U).

In the example below, we assume the member retired in 1980 and was eligible for the first 2% cost of living adjustment (COLA) in 1982. The member also has a base

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allowance of \$1,000 per month. The 2011 CPI was calculated using an estimate of the inflation for the last three months of the calendar year.

Year	Consumer Price Index	Cumulative Inflation to 31-Dec-2011	Total 2% COLA Increases
1980	246.8	173.41%	81.14%
2011	674.786 (estimated)	0.00%	0.00%

Here is the mechanics of the math on the calculation of the PPPA benefit on December 31, 2011.

<b>Monthly benefit as of May 1, 2011: (Assuming 2% Cola increases since 1980)</b>
Total COLA adjustments: 30
81.14% (total 2% cola increases) added to the retiree's base
$\$1,000.00 \times 81.14\% = \$811.40$
$\$1,000.00 + \$811.40 = \$1,811.40$ (Monthly Benefit)

<b>Maximum monthly benefit as of December 31, 2011: (Assuming inflation was matched every year since 1980)</b>
The 1980 CPI = 246.8
The 2011 CPI = 674.786
The amount of inflation experienced during the retiree's retirement through 2011 is calculated as follows: $674.786 \div 246.8 = 2.734141$ or approximately 173.41 percent inflation. The retiree's base allowance of $\$1,000.00 \times 2.734141 = \$2,734.14$ , which is the maximum allowance they could receive if they matched inflation every year through 2011.

<b>Purchasing Power of the retiree as of December 31, 2011:</b>
Retiree's monthly benefit of $\$1,811.40 \div \$2,734.14 = 66.25\%$
66.25 percent is the purchasing power of the retiree's allowance in 2011. Since this is below 75 percent, the retiree is eligible to receive PPPA.

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<b>PPPA as of December 31, 2011:</b>
PPPA ensures that the retiree's benefit will be 75 percent (State and Schools) of \$2,734.14 which is the maximum allowance the retiree could receive if they matched inflation every year through 2011.
75% of \$2,734.14 = \$2,050.61 (Gross Allowance)
<b>\$2,050.61 - \$1,811.40 = \$239.21 (PPPA)</b>

If purchasing power has fallen below the threshold, a PPPA adjustment will be made to the applicable pension amounts. Though there is no set timeframe for PPPA, members do not usually receive this adjustment until 25 or more years into retirement.

The following retirees receive the PPPA benefit:

- Retirees with State or school service that retired in 1982 or earlier
- Retirees with public agency service (receiving a 2 percent COLA) that retired in 1987 or earlier
- Retirees who have service with agencies that contract for 3, 4, or 5 percent COLAs will generally not receive the PPPA benefit since the higher COLA will keep them above the 75 or 80 percent purchasing power threshold.

Collectively, these three methods ensure that CalPERS State and Schools retirees and survivors are receiving a minimum of seventy-five percent (eighty percent for public agency retirees and survivors) of the original benefit at retirement, adjusted for inflation. Stated another way, a member's benefit must first lose twenty-five percent (twenty percent for public agency retirees) of its value at retirement, before it is protected from the full effects of inflation. However, this level of inflation protection is not guaranteed for State and School members since the PPPA benefits payable to those members are limited to 1.1% of accumulated member contributions. An analysis performed in 2005 by CalPERS actuarial staff demonstrated that based on the current actuarial assumptions, PPPA benefits are not expected to be limited to 1.1% over the next 50 years.

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Each of the above methods is summarized in the table below.

### Methods in Use to Adjust Allowances

	<b>Annual COLA</b>	<b>Ad Hoc</b>	<b>PPPA</b>
State	2% First Tier 3% Second Tier	Noted in Exhibit C Noted in Exhibit C	75%
Schools	2%	Noted in Exhibit E	75%
Public Agencies	2%, 3%, 4% or 5% depending on the contract	Noted in Exhibit G	80%

Sections of the California Public Employees Retirement Law (PERL) describing the above methods in detail are in the “**Background Information**” section.

### Inflation as Measured by the COLA Report

The Consumer Price Index (CPI) released by the U.S. Department of Labor-Bureau of Labor Statistics (BLS) is used as a measure of inflation. BLS measures the CPI for two population groups:

1. All Urban Consumers (CPI-U)
2. Urban Wage and Clerical Workers (CPI-W)

CPI-W covers about 32 percent of the U.S population and CPI-U accounts for about 87 percent of the U.S population. The CPI-U is the most commonly used index because it has the broadest population coverage. Social Security and Supplemental Security Income benefits are based on the increase in CPI-W.

In this report, the CPI for all Urban Consumers (CPI-U), which is based on 1967 prices, is used in calculating the annual inflation rates. To get the current year inflation, we subtract last year's annual index from the current annual index then divide by last year's number; multiply the result by 100 and add a % sign. Overall, average inflation in 2011 was 3.2 percent. See Exhibit A-1.

Inflation as currently measured is consistent with the method for calculating the regular cost-of-living adjustments (COLA) applied to CalPERS retirement benefits.

The method used in this report is also consistent with the method used to calculate the Purchasing Power Protection Allowance (PPPA) increases. Due to timing

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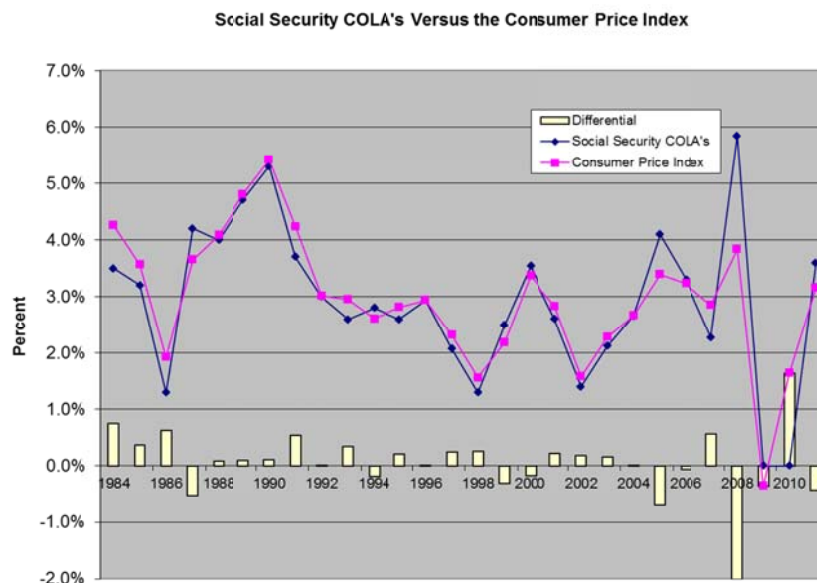
considerations, the PPPA increases are calculated using an estimate of the inflation for the last three months of the calendar year just prior to the increase.

There were no changes in methods since the prior year.

### Social Security and Supplemental Security Income benefits

Social Security and Supplemental Security Income benefits increase automatically each year based on the rise in the Bureau of Labor Statistics' *Consumer Price Index for Urban Wage Earners and Clerical Workers* (CPI-W), from the third quarter of the last year a COLA was applied to the corresponding period of the current year. By law, COLA for Social Security is determined by rules set up by Congress in 1975. In order to determine COLA for Social Security, the administration uses the Consumer Price Index for Urban Workers (CPI-W) from the prior year. The cost-of-living adjustment to increase Social Security benefits in 2012 was 3.6 percent. The COLA increase for 2012 was based on the percentage increase in the average CPI-W for the third quarter in 2011 over the average of the third quarter in 2008 as 2008 was the last year in which a COLA was applied.

The chart below shows the annual COLAs based on the CPI-W and granted to Social Security beneficiaries between 1988 and 2012. These COLAs averaged 2.9 percent over the past 25 years. Also shown in the same Chart are increases in the cost of living based on the CPI-U. The average was 2.9 percent over the same period. The differences between the two are illustrated in the bar graph of the same chart.



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### Results

The annual and cumulative rates of inflation, the average inflation, and the value of \$1.00 after inflation from 1966 to 2011 are shown in Exhibit A-1. The annual inflation rates and the average inflation rates are presented in charts in Exhibit A-2. The average annual inflation rates for each decade since 1960 are also presented in a chart in Exhibit A-3.

The PPPA benefit payment increases effective January 1, 2012 are shown in Exhibit B-1, and the PPPA benefit payments as a percentage of the total allowance effective January 1, 2012 are shown in Exhibit B-2. Charts illustrating the information in Exhibits B-1 and B-2 are presented in Exhibit B-3.

A table showing the number of retirees and beneficiaries for State, Schools and Public Agencies, years retired, the total COLA increases, and the retained purchasing power is presented in Exhibit I.

### Conclusion

The overall inflation rate was 3.2 percent in 2011. Since 1983, inflation has averaged 3.0 percent and remains in line with the current assumed inflation of 3.0 percent used in the actuarial valuations. If this average inflation continues into the future, given an annual COLA of 2 percent compounded, and no prospective ad-hoc increases, the purchasing power of new retiree benefits would fall to 80 percent in their 22<sup>nd</sup> year of retirement and 75 percent in their 29<sup>th</sup> year of retirement. Given the current plan provisions and the current actuarial assumptions, the system's ability to maintain the legislatively specified purchasing power of members' benefits remains strong.

## **EXHIBITS**

## Exhibit A - I

### Increases In The Cost of Living: 1965 - 2011

Year	Calendar Year Average CPI*	Annual US Inflation Rate	Cumulative Inflation To 31-Dec-2011	Average Inflation From Given Year To 31-Dec-2011	Value of \$1 After Inflation
1965	94.500	-	613.0%	4.4%	\$0.14
1966	97.200	2.9%	593.2%	4.4%	\$0.14
1967	100.000	2.9%	573.8%	4.4%	\$0.15
1968	104.200	4.2%	546.7%	4.4%	\$0.15
1969	109.800	5.4%	513.7%	4.4%	\$0.16
1970	116.300	5.9%	479.4%	4.4%	\$0.17
1971	121.300	4.3%	455.5%	4.4%	\$0.18
1972	125.300	3.3%	437.8%	4.4%	\$0.19
1973	133.100	6.2%	406.2%	4.4%	\$0.20
1974	147.700	11.0%	356.2%	4.2%	\$0.22
1975	161.200	9.1%	318.0%	4.1%	\$0.24
1976	170.500	5.8%	295.2%	4.0%	\$0.25
1977	181.500	6.5%	271.2%	3.9%	\$0.27
1978	195.400	7.7%	244.8%	3.8%	\$0.29
1979	217.400	11.3%	209.9%	3.6%	\$0.32
1980	246.800	13.5%	173.0%	3.3%	\$0.37
1981	272.400	10.4%	147.4%	3.1%	\$0.40
1982	289.100	6.1%	133.1%	3.0%	\$0.43
1983	298.400	3.2%	125.8%	3.0%	\$0.44
1984	311.100	4.3%	116.6%	2.9%	\$0.46
1985	322.200	3.6%	109.1%	2.9%	\$0.48
1986	328.400	1.9%	105.2%	2.9%	\$0.49
1987	340.400	3.7%	97.9%	2.9%	\$0.51
1988	354.300	4.1%	90.2%	2.8%	\$0.53
1989	371.300	4.8%	81.5%	2.7%	\$0.55
1990	391.400	5.4%	72.2%	2.6%	\$0.58
1991	408.000	4.2%	65.2%	2.5%	\$0.61
1992	420.300	3.0%	60.3%	2.5%	\$0.62
1993	432.700	3.0%	55.7%	2.5%	\$0.64
1994	444.000	2.6%	51.8%	2.5%	\$0.66
1995	456.500	2.8%	47.6%	2.5%	\$0.68
1996	469.900	2.9%	43.4%	2.4%	\$0.70
1997	480.800	2.3%	40.1%	2.4%	\$0.71
1998	488.300	1.6%	38.0%	2.5%	\$0.72
1999	499.000	2.2%	35.0%	2.5%	\$0.74
2000	515.800	3.4%	30.6%	2.5%	\$0.77
2001	530.400	2.8%	27.0%	2.4%	\$0.79
2002	538.800	1.6%	25.1%	2.5%	\$0.80
2003	551.100	2.3%	22.3%	2.5%	\$0.82
2004	565.800	2.7%	19.1%	2.5%	\$0.84
2005	585.000	3.4%	15.2%	2.4%	\$0.87
2006	603.900	3.2%	11.6%	2.2%	\$0.90
2007	621.106	2.8%	8.5%	2.1%	\$0.92
2008	644.951	3.8%	4.5%	1.5%	\$0.96
2009	642.658	-0.4%	4.8%	2.4%	\$0.95
2010	653.198	1.6%	3.2%	3.2%	\$0.97
2011 . . . .	673.818	3.2%	-		\$1.00

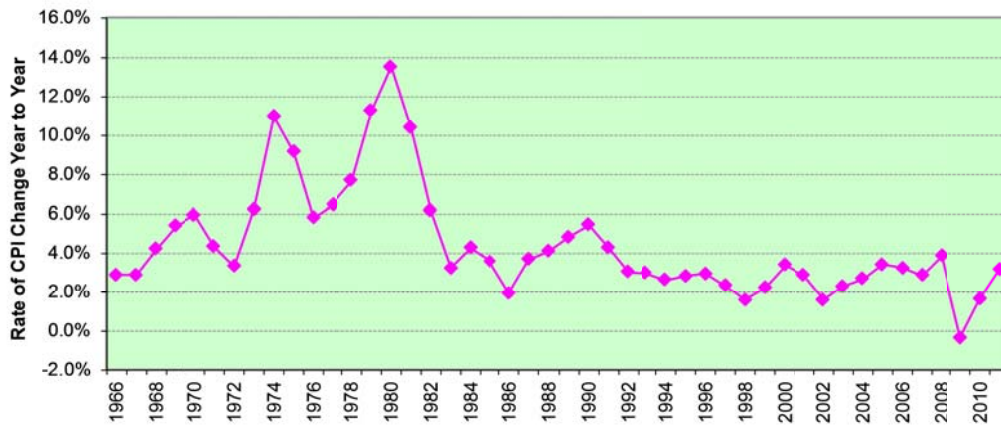
\* CPI = Consumer Price Index For All Urban Consumers (base period: 1967 = 100)

Effective 2008, the Labor Department started publishing the consumer price index out to three decimal places.

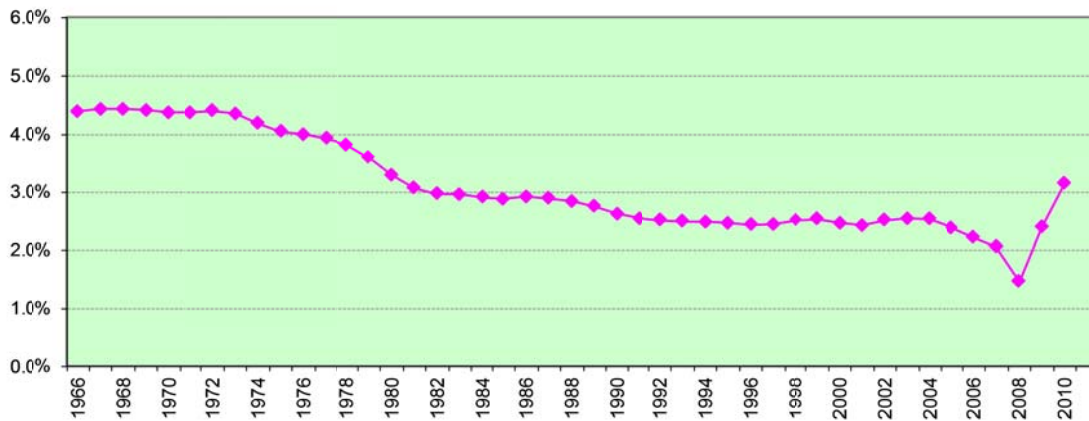
Source: U.S. Department of Labor - Bureau of Labor Statistics

### Exhibit A - 2

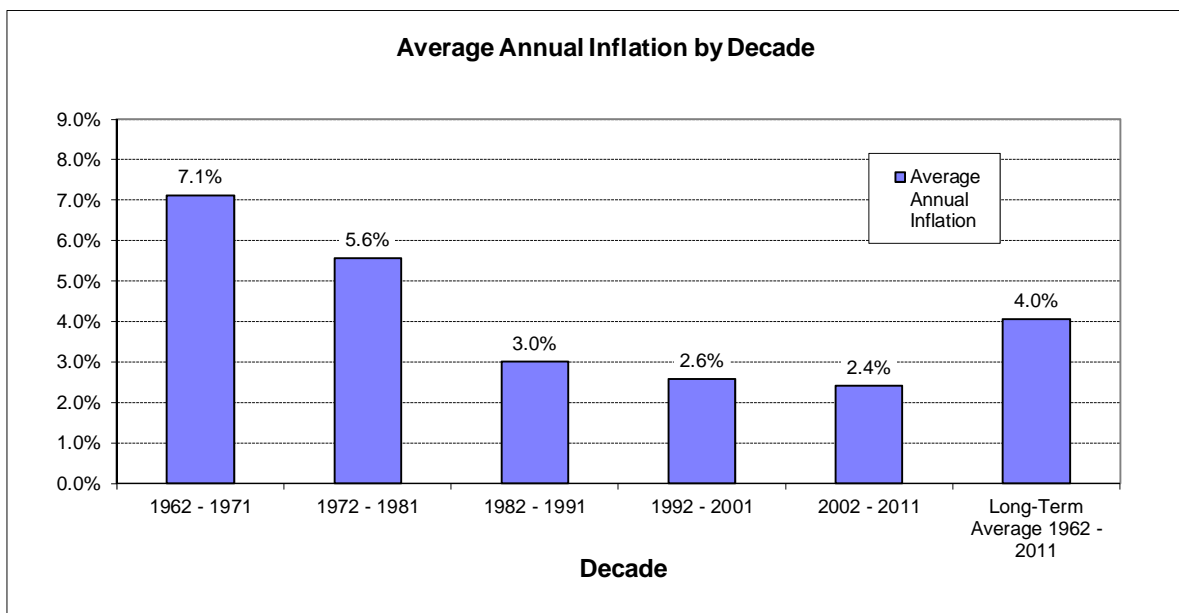
**Annual Inflation Rates: 1966-2011**  
**Data: Bureau of Labor Statistics**



**Average Inflation Rate From Given Year to 31-Dec 2011**



**Exhibit A - 3**



The above chart shows the Annual Inflation Rates for each decade from 1962 to 2011. Each bar represents the average Annual Inflation for the decade (not the total cumulative inflation for that 10 year period). That means that we took the annual inflation rates for each of the ten years of the decade and then averaged them all together. Since 1962, the average inflation has been 4.0 percent.

**Exhibit B-1**

**2012 PPPA Cost-of-Living Benefit Percentage Increases**  
(Increases Apply to the Total Allowance Excluding Previous PPPA Adjustments)

Year Of Retirement	State Retirees 2% COLA	School Retirees	Contracting Agencies Retirees	
			High (2% only)	Low (5% only)
1965 or Before	54.1%	63.5%	134.3%	0.0%
1966 .....	58.7%	67.3%	132.4%	0.0%
1967 .....	61.0%	68.0%	130.4%	0.0%
1968 .....	60.9%	67.9%	125.5%	0.0%
1969 .....	60.7%	67.6%	118.3%	0.0%
1970 .....	59.6%	66.5%	110.2%	0.0%
1971 .....	59.2%	66.1%	105.6%	0.0%
1972 .....	60.0%	66.9%	103.0%	0.0%
1973 .....	58.5%	65.4%	94.9%	0.0%
1974 .....	56.2%	62.9%	79.2%	0.0%
1975 .....	48.0%	57.0%	67.4%	0.0%
1976 .....	45.6%	51.4%	61.5%	0.0%
1977 .....	39.5%	45.1%	54.7%	0.0%
1978 .....	32.1%	37.4%	46.6%	0.0%
1979 .....	21.2%	26.0%	34.4%	0.0%
1980 .....	8.9%	13.2%	20.8%	0.0%
1981 .....	4.6%	4.6%	11.6%	0.0%
1982 .....	0.5%	0.5%	7.3%	0.0%
1983 .....	0.0%	0.0%	6.0%	0.0%
1984 .....	0.0%	0.0%	3.7%	0.0%
1985 .....	0.0%	0.0%	2.1%	0.0%
1986 .....	0.0%	0.0%	2.2%	0.0%
1987 .....	0.0%	0.0%	0.6%	0.0%
1988 .....	0.0%	0.0%	0.0%	0.0%
1989 .....	0.0%	0.0%	0.0%	0.0%
1990 .....	0.0%	0.0%	0.0%	0.0%
1991 .....	0.0%	0.0%	0.0%	0.0%
1992 .....	0.0%	0.0%	0.0%	0.0%
1993 .....	0.0%	0.0%	0.0%	0.0%
1994 .....	0.0%	0.0%	0.0%	0.0%
1995 .....	0.0%	0.0%	0.0%	0.0%
1996 .....	0.0%	0.0%	0.0%	0.0%
1997 .....	0.0%	0.0%	0.0%	0.0%
1998 .....	0.0%	0.0%	0.0%	0.0%
1999 .....	0.0%	0.0%	0.0%	0.0%
2000 .....	0.0%	0.0%	0.0%	0.0%
2001 .....	0.0%	0.0%	0.0%	0.0%
2002 .....	0.0%	0.0%	0.0%	0.0%
2003 .....	0.0%	0.0%	0.0%	0.0%
2004 .....	0.0%	0.0%	0.0%	0.0%
2005 .....	0.0%	0.0%	0.0%	0.0%
2006 .....	0.0%	0.0%	0.0%	0.0%
2007 .....	0.0%	0.0%	0.0%	0.0%
2008 .....	0.0%	0.0%	0.0%	0.0%
2009 .....	0.0%	0.0%	0.0%	0.0%
2010 .....	0.0%	0.0%	0.0%	0.0%
2011 .....	0.0%	0.0%	0.0%	0.0%

The PPPA payments are based upon the average calendar year CPI changes.

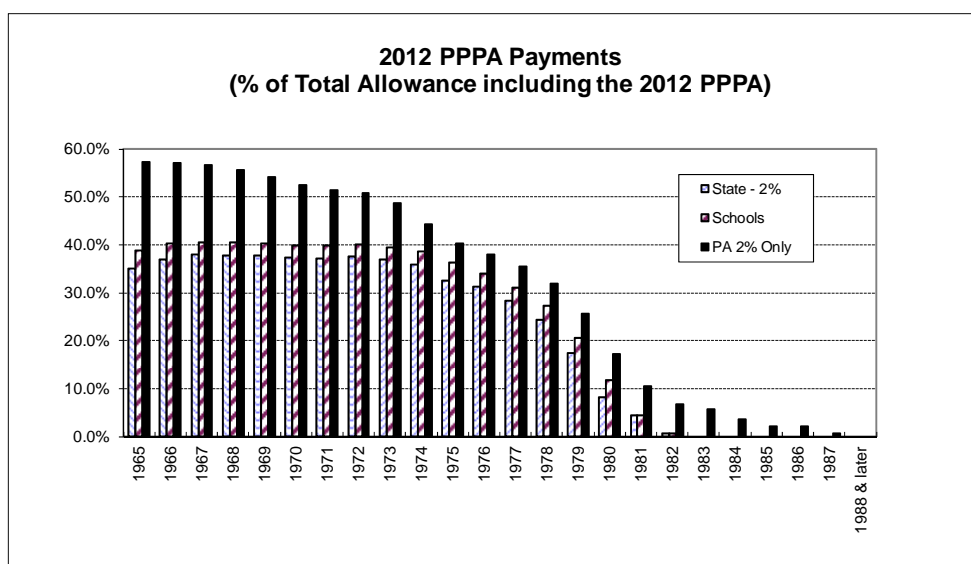
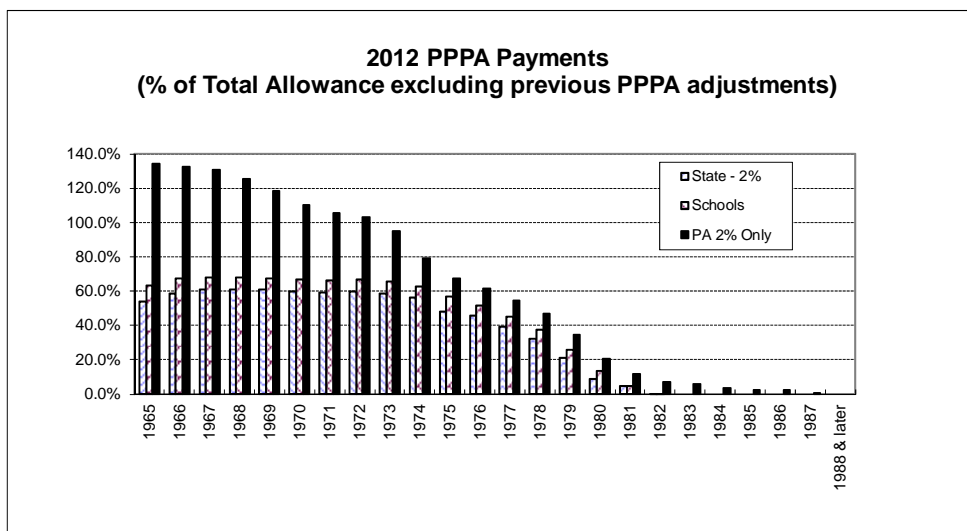
**Exhibit B-2**

**2012 PPPA Cost-of-Living Benefit Payments as a % of  
The Total Allowance Payable (Including the 2012 PPPA)**

Year Of Retirement	State Retirees 2% COLA	School Retirees	Contracting Agencies Retirees	
			High (2% only)	Low (5% only)
1965 or Before	35.1%	38.8%	57.3%	0.0%
1966 .....	37.0%	40.2%	57.0%	0.0%
1967 .....	37.9%	40.5%	56.6%	0.0%
1968 .....	37.9%	40.4%	55.7%	0.0%
1969 .....	37.8%	40.3%	54.2%	0.0%
1970 .....	37.3%	39.9%	52.4%	0.0%
1971 .....	37.2%	39.8%	51.4%	0.0%
1972 .....	37.5%	40.1%	50.7%	0.0%
1973 .....	36.9%	39.5%	48.7%	0.0%
1974 .....	36.0%	38.6%	44.2%	0.0%
1975 .....	32.4%	36.3%	40.3%	0.0%
1976 .....	31.3%	33.9%	38.1%	0.0%
1977 .....	28.3%	31.1%	35.4%	0.0%
1978 .....	24.3%	27.2%	31.8%	0.0%
1979 .....	17.5%	20.6%	25.6%	0.0%
1980 .....	8.1%	11.7%	17.2%	0.0%
1981 .....	4.4%	4.4%	10.4%	0.0%
1982 .....	0.5%	0.5%	6.8%	0.0%
1983 .....	0.0%	0.0%	5.6%	0.0%
1984 .....	0.0%	0.0%	3.6%	0.0%
1985 .....	0.0%	0.0%	2.1%	0.0%
1986 .....	0.0%	0.0%	2.2%	0.0%
1987 .....	0.0%	0.0%	0.6%	0.0%
1988 .....	0.0%	0.0%	0.0%	0.0%
1989 .....	0.0%	0.0%	0.0%	0.0%
1990 .....	0.0%	0.0%	0.0%	0.0%
1991 .....	0.0%	0.0%	0.0%	0.0%
1992 .....	0.0%	0.0%	0.0%	0.0%
1993 .....	0.0%	0.0%	0.0%	0.0%
1994 .....	0.0%	0.0%	0.0%	0.0%
1995 .....	0.0%	0.0%	0.0%	0.0%
1996 .....	0.0%	0.0%	0.0%	0.0%
1997 .....	0.0%	0.0%	0.0%	0.0%
1998 .....	0.0%	0.0%	0.0%	0.0%
1999 .....	0.0%	0.0%	0.0%	0.0%
2000 .....	0.0%	0.0%	0.0%	0.0%
2001 .....	0.0%	0.0%	0.0%	0.0%
2002 .....	0.0%	0.0%	0.0%	0.0%
2003 .....	0.0%	0.0%	0.0%	0.0%
2004 .....	0.0%	0.0%	0.0%	0.0%
2005 .....	0.0%	0.0%	0.0%	0.0%
2006 .....	0.0%	0.0%	0.0%	0.0%
2007 .....	0.0%	0.0%	0.0%	0.0%
2008 .....	0.0%	0.0%	0.0%	0.0%
2009 .....	0.0%	0.0%	0.0%	0.0%
2010 .....	0.0%	0.0%	0.0%	0.0%
2011 .....	0.0%	0.0%	0.0%	0.0%

The PPPA payments are based upon the average calendar year CPI changes.

### Exhibit B-3



Note:

No CalPERS member that retired in 1987 or later is currently in receipt of PPPA payment

### Exhibit C

#### California Public Employees' Retirement System Permanent Ad Hoc Cost-of-Living Benefit Increases Provided in the Past<sup>1</sup>

##### Retired State Members

Period During Which Retirement Or Death Occurred Prior to Retirement	Section 21251.75 1968 Leg. <sup>2</sup>	Section 21222.1 1972 Leg. <sup>2</sup>	Section 21222.2 1973 Leg. <sup>2</sup>	Section 21222.7 1975 Leg.	Section 21323 1977 Leg. <sup>3</sup>	Section 21334 1977 Leg. <sup>4</sup>	Section 21327 1979 Leg.	Section 21320 1981 Leg.	Total <sup>1</sup>
1965 .....	4%	5%		15%	7%	2.01%		4%	42.6%
1966 .....	2%	5%		14%	6%	2.01%		4%	37.3%
1967 .....		5%		13%	5%	2.01%	1.51%	4%	34.2%
1968 .....		5%		12%	4%	2.01%	1.26%	4%	31.4%
1969 .....		5%		9%	3%	2.01%	1.86%	4%	27.4%
1970 .....		5%		6%	2%	2.01%	2.55%	4%	23.5%
1971 1st half			5%	5%	2%	2.01%	1.91%	4%	21.6%
1971 2nd half				5%	1%	2.01%	7.05%	4%	20.4%
1972 .....				4%	1%	2.01%	6.76%	4%	19.0%
1973 .....				3%	1%	2.01%	4.45%	4%	15.3%
1974 1st half					1%	2.01%	0.47%	4%	7.7%
1974 2nd half						2.01%	1.31%	4%	7.5%
1975 .....						2.01%		4%	6.1%
1976 .....								4%	4.0%
1977 .....								4%	4.0%
1978 .....								4%	4.0%
1979 .....								4%	4.0%
1980 .....								4%	4.0%
1981 .....									0.0%
1982 .....									0.0%
1983 .....									0.0%
1984 .....									0.0%
1985 .....									0.0%
1986 .....									0.0%
1987 .....									0.0%
1988 .....									0.0%
1989 .....									0.0%
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1991 .....									0.0%
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1997 .....									0.0%
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2002 .....									0.0%
2003 .....									0.0%
2004 .....									0.0%
2005 .....									0.0%
2006 .....									0.0%
2007 .....									0.0%
2008 .....									0.0%
2009 .....									0.0%
2010 .....									0.0%
2011 .....									0.0%

<sup>1</sup> Excludes the former IDDA, EPDA, Boatwright, SB400 ad hoc COLA increases and current PPPA programs.

<sup>2</sup> Section 21251.75 was repealed in 1972. Sections 21222.1 and 21222.2 were available until 1/1/79.

<sup>3</sup> This section was repealed in 1996.

<sup>4</sup> The average increase under old Section 21228 was 2.01%. The Section Provided a 3% increase on the first \$400 of monthly benefit with a maximum increase of \$12 per month. This section was repealed in 1996.

## Exhibit D

**California Public Employees' Retirement System Cost-Of-Living  
Benefit Increases<sup>1</sup> Required To Restore 100 percent Of The Initial Purchasing Power  
Of Retirement Allowances As Of December 31, 2011**

**Retired State Members**

Period During Which Retirement or Death Occurred Prior to Retirement	Calendar Year Average CPI	Increase in the Cost-of-Living from the Calendar Year of Retirement or Death to 12/31/2011	Total Permanent Ad Hoc COLA Increases <sup>1</sup>	Total Annual 2% COLA Increases Through 12/31/2011	PPPA Increases on 12/31/2011	Total COLA Increases <sup>1</sup> Through 12/31/2011	Supplemental COLA <sup>1</sup> Increases Required
1965 .....	94.5	613.0%	42.6%	143.8%	54.1%	435.7%	33.1%
1966 .....	97.2	593.2%	37.3%	139.0%	58.7%	420.8%	33.1%
1967 .....	100.0	573.8%	34.2%	134.3%	61.0%	406.2%	33.1%
1968 .....	104.2	546.7%	31.4%	129.7%	60.9%	385.6%	33.2%
1969 .....	109.8	513.7%	27.4%	125.2%	60.7%	361.1%	33.1%
1970 .....	116.3	479.4%	23.5%	120.8%	59.6%	335.2%	33.1%
1971 1st Half	121.3	455.5%	21.6%	116.5%	59.2%	319.1%	32.5%
1971 2nd Half	121.3	455.5%	20.4%	116.5%	59.2%	315.0%	33.9%
1972 .....	125.3	437.8%	19.0%	112.2%	60.0%	304.0%	33.1%
1973 .....	133.1	406.2%	15.3%	108.1%	58.5%	280.3%	33.1%
1974 1st Half	147.7	356.2%	7.7%	104.0%	56.2%	243.2%	32.9%
1974 2nd Half	147.7	356.2%	7.5%	104.0%	56.2%	242.5%	33.2%
1975 .....	161.2	318.0%	6.1%	100.0%	48.0%	214.1%	33.1%
1976 .....	170.5	295.2%	4.0%	96.1%	45.6%	196.9%	33.1%
1977 .....	181.5	271.2%	4.0%	92.2%	39.5%	178.8%	33.1%
1978 .....	195.4	244.8%	4.0%	88.5%	32.1%	159.0%	33.1%
1979 .....	217.4	209.9%	4.0%	84.8%	21.2%	132.9%	33.1%
1980 .....	246.8	173.0%	4.0%	81.1%	8.9%	105.1%	33.1%
1981 .....	272.4	147.4%	0.0%	77.6%	4.6%	85.8%	33.2%
1982 .....	289.1	133.1%	0.0%	74.1%	0.5%	75.0%	33.2%
1983 .....	298.4	125.8%	0.0%	70.7%	0.0%	70.7%	32.3%
1984 .....	311.1	116.6%	0.0%	67.3%	0.0%	67.3%	29.5%
1985 .....	322.2	109.1%	0.0%	64.1%	0.0%	64.1%	27.4%
1986 .....	328.4	105.2%	0.0%	60.8%	0.0%	60.8%	27.6%
1987 .....	340.4	97.9%	0.0%	57.7%	0.0%	57.7%	25.5%
1988 .....	354.3	90.2%	0.0%	54.6%	0.0%	54.6%	23.0%
1989 .....	371.3	81.5%	0.0%	51.6%	0.0%	51.6%	19.7%
1990 .....	391.4	72.2%	0.0%	48.6%	0.0%	48.6%	15.9%
1991 .....	408.0	65.2%	0.0%	45.7%	0.0%	45.7%	13.4%
1992 .....	420.3	60.3%	0.0%	42.8%	0.0%	42.8%	12.3%
1993 .....	432.7	55.7%	0.0%	40.0%	0.0%	40.0%	11.2%
1994 .....	444.0	51.8%	0.0%	37.3%	0.0%	37.3%	10.6%
1995 .....	456.5	47.6%	0.0%	34.6%	0.0%	34.6%	9.7%
1996 .....	469.9	43.4%	0.0%	31.9%	0.0%	31.9%	8.7%
1997 .....	480.8	40.1%	0.0%	29.4%	0.0%	29.4%	8.3%
1998 .....	488.3	38.0%	0.0%	26.8%	0.0%	26.8%	8.8%
1999 .....	499.0	35.0%	0.0%	24.3%	0.0%	24.3%	8.6%
2000 .....	515.8	30.6%	0.0%	21.9%	0.0%	21.9%	7.1%
2001 .....	530.4	27.0%	0.0%	19.5%	0.0%	19.5%	6.3%
2002 .....	538.8	25.1%	0.0%	17.2%	0.0%	17.2%	6.7%
2003 .....	551.1	22.3%	0.0%	14.9%	0.0%	14.9%	6.4%
2004 .....	565.8	19.1%	0.0%	12.6%	0.0%	12.6%	5.8%
2005 .....	585.0	15.2%	0.0%	10.4%	0.0%	10.4%	4.3%
2006 .....	603.9	11.6%	0.0%	8.2%	0.0%	8.2%	3.1%
2007 .....	621.1	8.5%	0.0%	6.1%	0.0%	5.2%	3.2%
2008 .....	645.0	4.5%	0.0%	4.0%	0.0%	1.3%	3.2%
2009 .....	642.7	4.8%	0.0%	2.0%	0.0%	1.6%	3.1%
2010 .....	653.2	3.2%	0.0%	0.0%	0.0%	0.0%	3.2%
2011 .....	673.8	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

<sup>1</sup>To be consistent with the legislature intention when SB400 was enacted, 1% to 6% Ad Hoc COLA increases are not reflected in the figures shown above.

### Exhibit E

#### California Public Employees' Retirement System Permanent Ad Hoc Cost-of Living Benefit Increases Provided in the Past<sup>1</sup>

##### Retired School Members

Period During Which Retirement Or Death Occurred Prior to Retirement	Section 21251.75 1968 Leg. <sup>2</sup>	Section 21222.1 1972 Leg. <sup>2</sup>	Section 21222.2 1973 Leg. <sup>2</sup>	Section 21321 <sup>3</sup> 1978 Leg.	Section 21324 <sup>3</sup> 1978 Leg.	Section 21328 <sup>3</sup> 1979 Leg.	Total <sup>1</sup>
1965 .....	4%	5%		15%	7%		34.4%
1966 .....	2%	5%		14%	6%	0.62%	30.2%
1967 .....		5%		13%	5%	3.21%	28.6%
1968 .....		5%		12%	4%	2.97%	25.9%
1969 .....		5%		9%	3%	3.57%	22.1%
1970 .....		5%		6%	2%	4.26%	18.4%
1971 1st half			5%	5%	2%	3.62%	16.5%
1971 2nd half				5%	1%	8.86%	15.4%
1972 .....				4%	1%	8.57%	14.0%
1973 .....				3%	1%	6.22%	10.5%
1974 1st half					1%	2.16%	3.2%
1974 2nd half						3.00%	3.0%
1975 .....							0.0%
1976 .....							0.0%
1977 .....							0.0%
1978 .....							0.0%
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2007 .....							0.0%
2008 .....							0.0%
2009 .....							0.0%
2010 .....							0.0%
2011 .....							0.0%

<sup>1</sup> Excludes the former IDDA, EPDA, Boatwright, SB400 ad hoc COLA increases and current PPPA programs.

<sup>2</sup> Section 21251.75 was repealed in 1972. Sections 21222.1 and 21222.2 were available until 1/1/79.

<sup>3</sup> This section was repealed in 1996.

## Exhibit F

**California Public Employees' Retirement System Cost-Of-Living  
Benefit Increases<sup>1</sup> Required To Restore 100 percent Of The Initial Purchasing Power  
Of Retirement Allowances As Of December 31, 2011**

**Retired School Members**

Period During Which Retirement Or Death Occurred Prior To Retirement	Calendar Year Average CPI	Increase in the Cost-of-Living from the Calendar Year of Retirement or Death to 12/31/2011	Total Permanent Ad Hoc COLA Increases <sup>1</sup>	Total Annual 2% COLA Increases Through 12/31/2011	PPPA Increases on 12/31/2011	Total COLA Increases <sup>1</sup> Through 12/31/2011	Supplemental COLA <sup>1</sup> Increases Required
1965 .....	94.5	613.0%	34.4%	143.8%	63.5%	435.7%	33.1%
1966 .....	97.2	593.2%	30.2%	139.0%	67.3%	420.6%	33.2%
1967 .....	100.0	573.8%	28.6%	134.3%	68.0%	406.2%	33.1%
1968 .....	104.2	546.7%	25.9%	129.7%	67.9%	385.6%	33.2%
1969 .....	109.8	513.7%	22.1%	125.2%	67.6%	360.8%	33.2%
1970 .....	116.3	479.4%	18.4%	120.8%	66.5%	335.3%	33.1%
1971 1st half	121.3	455.5%	16.5%	116.5%	66.1%	318.9%	32.6%
1971 2nd half	121.3	455.5%	15.4%	116.5%	66.1%	315.0%	33.9%
1972 .....	125.3	437.8%	14.0%	112.2%	66.9%	303.7%	33.2%
1973 .....	133.1	406.2%	10.5%	108.1%	65.4%	280.3%	33.1%
1974 1st half	147.7	356.2%	3.2%	104.0%	62.9%	243.0%	33.0%
1974 2nd half	147.7	356.2%	3.0%	104.0%	62.9%	242.3%	33.3%
1975 .....	161.2	318.0%	0.0%	100.0%	57.0%	214.0%	33.1%
1976 .....	170.5	295.2%	0.0%	96.1%	51.4%	196.9%	33.1%
1977 .....	181.5	271.2%	0.0%	92.2%	45.1%	178.9%	33.1%
1978 .....	195.4	244.8%	0.0%	88.5%	37.4%	159.0%	33.1%
1979 .....	217.4	209.9%	0.0%	84.8%	26.0%	132.8%	33.1%
1980 .....	246.8	173.0%	0.0%	81.1%	13.2%	105.0%	33.2%
1981 .....	272.4	147.4%	0.0%	77.6%	4.6%	85.8%	33.2%
1982 .....	289.1	133.1%	0.0%	74.1%	0.5%	75.0%	33.2%
1983 .....	298.4	125.8%	0.0%	70.7%	0.0%	70.7%	32.3%
1984 .....	311.1	116.6%	0.0%	67.3%	0.0%	67.3%	29.5%
1985 .....	322.2	109.1%	0.0%	64.1%	0.0%	64.1%	27.4%
1986 .....	328.4	105.2%	0.0%	60.8%	0.0%	60.8%	27.6%
1987 .....	340.4	97.9%	0.0%	57.7%	0.0%	57.7%	25.5%
1988 .....	354.3	90.2%	0.0%	54.6%	0.0%	54.6%	23.0%
1989 .....	371.3	81.5%	0.0%	51.6%	0.0%	51.6%	19.7%
1990 .....	391.4	72.2%	0.0%	48.6%	0.0%	48.6%	15.9%
1991 .....	408.0	65.2%	0.0%	45.7%	0.0%	45.7%	13.4%
1992 .....	420.3	60.3%	0.0%	42.8%	0.0%	42.8%	12.3%
1993 .....	432.7	55.7%	0.0%	40.0%	0.0%	40.0%	11.2%
1994 .....	444.0	51.8%	0.0%	37.3%	0.0%	37.3%	10.6%
1995 .....	456.5	47.6%	0.0%	34.6%	0.0%	34.6%	9.7%
1996 .....	469.9	43.4%	0.0%	31.9%	0.0%	31.9%	8.7%
1997 .....	480.8	40.1%	0.0%	29.4%	0.0%	29.4%	8.3%
1998 .....	488.3	38.0%	0.0%	26.8%	0.0%	26.8%	8.8%
1999 .....	499.0	35.0%	0.0%	24.3%	0.0%	24.3%	8.6%
2000 .....	515.8	30.6%	0.0%	21.9%	0.0%	21.9%	7.1%
2001 .....	530.4	27.0%	0.0%	19.5%	0.0%	19.5%	6.3%
2002 .....	538.8	25.1%	0.0%	17.2%	0.0%	17.2%	6.7%
2003 .....	551.1	22.3%	0.0%	14.9%	0.0%	14.9%	6.4%
2004 .....	565.8	19.1%	0.0%	12.6%	0.0%	12.6%	5.8%
2005 .....	585.0	15.2%	0.0%	10.4%	0.0%	10.4%	4.3%
2006 .....	603.9	11.6%	0.0%	8.2%	0.0%	8.2%	3.1%
2007 .....	621.1	8.5%	0.0%	6.1%	0.0%	5.2%	3.2%
2008 .....	645.0	4.5%	0.0%	4.0%	0.0%	1.3%	3.2%
2009 .....	642.7	4.8%	0.0%	2.0%	0.0%	1.6%	3.1%
2010 .....	653.2	3.2%	0.0%	0.0%	0.0%	0.0%	3.2%
2011 .....	673.8	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

<sup>1</sup> To be consistent with the legislature intention when SB400 was enacted, 1% to 6% Ad Hoc COLA increases are not reflected in the figures shown above.

### Exhibit G

#### California Public Employees' Retirement System Permanent Ad Hoc Cost-of Living Benefit Increases Available to Contracting Agencies<sup>1</sup>

##### Retired Contracting Agency Members

Period During Which Retirement Or Death Occurred Prior to Retirement	Section 21251.75 1968 Leg. <sup>2</sup>	Section 21222.1 1972 Leg. <sup>2</sup>	Section 21222.2 1973 Leg. <sup>2</sup>	Section 21325 1977 Leg.	Section 21326 1977 Leg.	Section 21327 1979 Leg.	Section 21322.0 1983 Leg.	Section 21328 2000 Leg. <sup>3</sup>
1965 .....	4%	5%		15%	7%		4.00%	6.00%
1966 .....	2%	5%		14%	6%		4.00%	6.00%
1967 .....		5%		13%	5%	1.51%	4.00%	6.00%
1968 .....		5%		12%	4%	1.26%	4.00%	6.00%
1969 .....		5%		9%	3%	1.86%	4.00%	6.00%
1970 .....		5%		6%	2%	2.55%	4.00%	6.00%
1971 1st half			5%	5%	2%	1.91%	4.00%	6.00%
1971 2nd half				5%	1%	7.05%	4.00%	6.00%
1972 .....				4%	1%	6.76%	4.00%	6.00%
1973 .....				3%	1%	4.45%	4.00%	6.00%
1974 1st half					1%	0.47%	4.00%	6.00%
1974 2nd half						1.31%	4.00%	6.00%
1975 .....							4.00%	5.00%
1976 .....							4.00%	5.00%
1977 .....							4.00%	5.00%
1978 .....							4.00%	5.00%
1979 .....							4.00%	5.00%
1980 .....							4.00%	5.00%
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2008 .....								
2009 .....								
2010 .....								
2011 .....								

<sup>1</sup> Excludes the former IDDA, EPDA, Boatwright, and current PPPA programs.

<sup>2</sup> Section 21251.75 was repealed in 1972. Sections 21222.1 and 21222.2 were available until 1/1/79.

<sup>3</sup> Excluded from the PPPA calculation

**Exhibit H**

**California Public Employees' Retirement System Cost-Of-Living  
Benefit Increases<sup>1</sup> Required To Restore 100 percent Of The Initial Purchasing Power  
Of Retirement Allowances As Of December 31, 2011 \***

**Retired Contracting Agency Members**

<b>Period During Which Retirement Or Death Occurred Prior to Retirement</b>	<b>Calendar Year Average CPI</b>	<b>Increase in the Cost-of-Living from the Calendar Year of Retirement or Death to 12/31/2011</b>	<b>Total Annual 2% COLA Increases Through 12/31/2011</b>	<b>PPPA Increases on 12/31/2011</b>	<b>Total COLA Increases<sup>1</sup> Through 12/31/2011</b>	<b>Supplemental COLA<sup>1</sup> Increases Required</b>
1965 .....	94.5	613.0%	143.8%	134.3%	471.2%	24.8%
1966 .....	97.2	593.2%	139.0%	132.4%	455.4%	24.8%
1967 .....	100.0	573.8%	134.3%	130.4%	439.8%	24.8%
1968 .....	104.2	546.7%	129.7%	125.5%	418.1%	24.8%
1969 .....	109.8	513.7%	125.2%	118.3%	391.6%	24.8%
1970 .....	116.3	479.4%	120.8%	110.2%	364.2%	24.8%
1971 1st half	121.3	455.5%	116.5%	105.6%	345.0%	24.8%
1971 2nd half	121.3	455.5%	116.5%	105.6%	345.0%	24.8%
1972 .....	125.3	437.8%	112.2%	103.0%	330.8%	24.8%
1973 .....	133.1	406.2%	108.1%	94.9%	305.6%	24.8%
1974 1st half	147.7	356.2%	104.0%	79.2%	265.5%	24.8%
1974 2nd half	147.7	356.2%	104.0%	79.2%	265.5%	24.8%
1975 .....	161.2	318.0%	100.0%	67.5%	234.9%	24.8%
1976 .....	170.5	295.2%	96.1%	61.5%	216.6%	24.8%
1977 .....	181.5	271.3%	92.2%	54.7%	197.4%	24.8%
1978 .....	195.4	244.8%	88.5%	46.6%	176.3%	24.8%
1979 .....	217.4	209.9%	84.8%	34.4%	148.3%	24.8%
1980 .....	246.8	173.0%	81.1%	20.8%	118.7%	24.8%
1981 .....	272.4	147.4%	77.6%	11.6%	98.2%	24.8%
1982 .....	289.1	133.1%	74.1%	7.3%	86.7%	24.8%
1983 .....	298.4	125.8%	70.7%	6.0%	80.9%	24.8%
1984 .....	311.1	116.6%	67.3%	3.7%	73.5%	24.8%
1985 .....	322.2	109.1%	64.1%	2.1%	67.5%	24.8%
1986 .....	328.4	105.2%	60.8%	2.2%	64.4%	24.8%
1987 .....	340.4	97.9%	57.7%	0.6%	58.6%	24.8%
1988 .....	354.3	90.2%	54.6%	0.0%	54.6%	23.0%
1989 .....	371.3	81.5%	51.6%	0.0%	51.6%	19.7%
1990 .....	391.4	72.2%	48.6%	0.0%	48.6%	15.9%
1991 .....	408.0	65.2%	45.7%	0.0%	45.7%	13.4%
1992 .....	420.3	60.3%	42.8%	0.0%	42.8%	12.2%
1993 .....	432.7	55.7%	40.0%	0.0%	40.0%	11.2%
1994 .....	444.0	51.8%	37.3%	0.0%	37.3%	10.5%
1995 .....	456.5	47.6%	34.6%	0.0%	34.6%	9.7%
1996 .....	469.9	43.4%	31.9%	0.0%	31.9%	8.7%
1997 .....	480.8	40.1%	29.4%	0.0%	29.4%	8.3%
1998 .....	488.3	38.0%	26.8%	0.0%	26.8%	8.8%
1999 .....	499.0	35.0%	24.3%	0.0%	24.3%	8.6%
2000 .....	515.8	30.6%	21.9%	0.0%	21.9%	7.2%
2001 .....	530.4	27.0%	19.5%	0.0%	19.5%	6.3%
2002 .....	538.8	25.1%	17.2%	0.0%	17.2%	6.7%
2003 .....	551.1	22.3%	14.9%	0.0%	14.9%	6.4%
2004 .....	565.8	19.1%	12.6%	0.0%	12.6%	5.7%
2005 .....	585.0	15.2%	10.4%	0.0%	10.4%	4.3%
2006 .....	603.9	11.6%	8.2%	0.0%	8.2%	3.1%
2007 .....	621.1	8.5%	6.1%	0.0%	5.2%	3.2%
2008 .....	645.0	4.5%	4.0%	0.0%	1.3%	3.2%
2009 .....	642.7	4.8%	2.0%	0.0%	1.6%	3.2%
2010 .....	653.2	3.2%	0.0%	0.0%	0.0%	3.2%
2011 .....	673.8	0.0%	0.0%	0.0%	0.0%	0.0%

<sup>1</sup> To be consistent with the legislature intention when SB400 was enacted, 1% to 6% Ad Hoc COLA increases are not reflected in the figures shown above.

**Exhibit I**

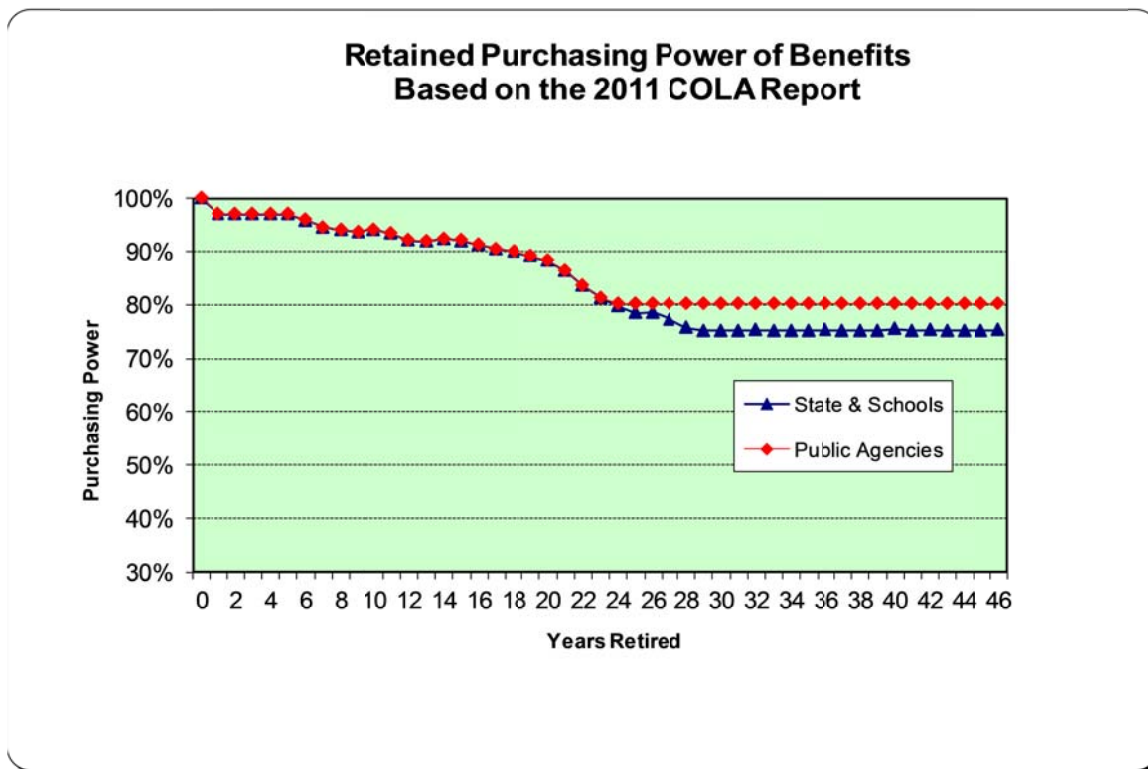
**Retained Purchasing Power for State, Schools and Public Agencies  
Based on Cost-of-Living increases in the 2011 COLA Report**

Year of Retirement	Years Retired	STATE			SCHOOLS			PUBLIC AGENCIES		
		Number of Retirees and Beneficiaries <sup>1</sup>	Total COLA Increases	Purchasing Power	Number of Retirees and Beneficiaries <sup>1</sup>	Total COLA Increases	Purchasing Power	Number of Retirees and Beneficiaries <sup>1</sup>	Total COLA Increases	Purchasing Power
1965 & Earlier	46	249	435.7%	75%	38	435.7%	75%	218	471.2%	80%
1966	45	79	420.8%	75%	27	420.6%	75%	70	455.4%	80%
1967	44	129	406.2%	75%	25	406.2%	75%	97	439.8%	80%
1968	43	140	385.6%	75%	42	385.6%	75%	110	418.1%	80%
1969	42	207	361.1%	75%	59	360.8%	75%	151	391.6%	80%
1970	41	274	335.2%	75%	117	335.3%	75%	166	364.2%	80%
1971	40	411	319.1%	75%	155	318.9%	75%	274	345.0%	80%
1972	39	560	304.0%	75%	286	303.7%	75%	322	330.8%	80%
1973	38	639	280.3%	75%	393	280.3%	75%	467	305.6%	80%
1974	37	834	242.5%	75%	502	242.3%	75%	592	265.5%	80%
1975	36	1,049	214.1%	75%	709	214.0%	75%	679	234.9%	80%
1976	35	1,545	196.9%	75%	1,176	196.9%	75%	1,168	216.6%	80%
1977	34	1,765	178.8%	75%	1,403	178.9%	75%	1,396	197.4%	80%
1978	33	2,012	159.0%	75%	1,635	159.0%	75%	1,683	176.3%	80%
1979	32	2,141	132.9%	75%	1,873	132.8%	75%	1,699	148.3%	80%
1980	31	2,849	105.1%	75%	2,025	105.0%	75%	1,787	118.7%	80%
1981	30	2,841	85.8%	75%	2,229	85.8%	75%	1,898	98.2%	80%
1982	29	3,020	75.0%	75%	2,290	75.0%	75%	2,025	86.7%	80%
1983	28	4,081	70.7%	76%	4,261	70.7%	76%	2,307	80.9%	80%
1984	27	3,300	67.3%	77%	2,313	67.3%	77%	2,321	73.5%	80%
1985	26	3,781	64.1%	78%	2,896	64.1%	78%	2,504	67.5%	80%
1986	25	3,815	60.8%	78%	3,209	60.8%	78%	2,688	64.4%	80%
1987	24	4,620	57.7%	80%	3,441	57.7%	80%	2,623	58.6%	80%
1988	23	4,214	54.6%	81%	3,753	54.6%	81%	2,902	54.6%	81%
1989	22	3,972	51.6%	84%	3,990	51.6%	84%	3,140	51.6%	84%
1990	21	4,059	48.6%	86%	4,113	48.6%	86%	3,125	48.6%	86%
1991	20	7,199	45.7%	88%	4,703	45.7%	88%	3,444	45.7%	88%
1992	19	6,507	42.8%	89%	5,015	42.8%	89%	4,022	42.8%	89%
1993	18	4,433	40.0%	90%	5,208	40.0%	90%	4,402	40.0%	90%
1994	17	5,504	37.3%	90%	5,173	37.3%	90%	4,593	37.3%	90%
1995	16	5,655	34.6%	91%	5,584	34.6%	91%	4,502	34.6%	91%
1996	15	6,217	31.9%	92%	5,410	31.9%	92%	4,750	31.9%	92%
1997	14	6,649	29.4%	92%	5,546	29.4%	92%	5,269	29.4%	92%
1998	13	6,583	26.8%	92%	5,911	26.8%	92%	5,661	26.8%	92%
1999	12	4,755	24.3%	92%	4,968	24.3%	92%	5,589	24.3%	92%
2000	11	12,123	21.9%	93%	8,591	21.9%	93%	6,640	21.9%	93%
2001	10	9,134	19.5%	94%	6,737	19.5%	94%	6,094	19.5%	94%
2002	9	9,042	17.2%	94%	7,580	17.2%	94%	7,684	17.2%	94%
2003	8	8,920	14.9%	94%	9,687	14.9%	94%	8,291	14.9%	94%
2004	7	12,213	12.6%	95%	9,226	12.6%	95%	10,521	12.6%	95%
2005	6	10,628	10.4%	96%	8,882	10.4%	96%	9,112	10.4%	96%
2006	5	10,416	8.2%	97%	8,707	8.2%	97%	9,255	8.2%	97%
2007	4	10,296	5.2%	97%	8,340	5.2%	97%	9,091	5.2%	97%
2008	3	10,531	1.3%	97%	8,682	1.3%	97%	9,132	1.3%	97%
2009	2	12,899	1.6%	97%	10,514	1.6%	97%	11,712	1.6%	97%
2010 <sup>2</sup>	1	5,221	0%	97%	4,282	0.0%	97%	3,986	0.0%	97%

<sup>1</sup> Number of retirees and beneficiaries are counts of records processed by our valuations. Multiple records may exist for those who have service in more than one coverage group.

<sup>2</sup> For 2010, these are retirees and beneficiaries through the first 6 months of 2010

### Exhibit J



The purchasing power of benefits for current State and Schools retirees falls to 75%, 29 years after retirement, and the purchasing power of benefits for current public agency retirees falls to 80%, 24 years after retirement.

## **BACKGROUND INFORMATION**

## California Public Employees' Retirement System 2011 Cost-of-Living Report

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### Background Information

Stats. 1968, Ch. 941, added Section 21310 of the Government Code which states that "It is the purpose of the Legislature in enacting this article to provide for the preservation of the purchasing power of benefits under the Public Employees' Retirement Law through a system of adjustments in benefits based on changes in living costs.

"Stats. 1977, Ch. 1186, added Section 21220.1 of the Government Code which was amended and renumbered as Section 20233 by Chapter 388, Statutes of 1981, and further amended by Chapter 83, Statutes of 1991. Section 20233 states that "The Board shall report to the Governor and the Legislature, not later than December 1 of each year, on the extent to which the purpose of Section 21310 is being achieved under the provisions of this article and the amount of supplementary increases in retirement allowances required to meet the objective of preserving the purchasing power of benefits provided by the system. The Board shall also determine and report on the increase in the State contribution rate required to provide the supplementary increases for State members, other than school members."

Article 3, Cost-of-Living Adjustment, consisting of Sections 21310 through 21338 of the Government Code provides cost-of-living benefit increases for the three major categories of retired PERS members (State, school, and contracting agency) and their survivors and beneficiaries. The five types of increases are discussed below.

#### 1. Automatic Annual Benefit Increases (Limited by CPI)

The Public Employees' Retirement Law provides for adjustment of allowances of retired persons or beneficiaries to reflect increases in the cost-of-living as indicated by the Consumer Price Index of the Bureau of Labor Statistics subject to specified limits and conditions. The first such increase is provided in the second calendar year following the calendar year of retirement or death before retirement. The calendar year of retirement, death before retirement, or 1965 if later, is called the base year and the benefit calculated at the time of retirement or death before retirement is called the base allowance. The adjusted monthly allowance is equal to the base allowance multiplied by an adjustment factor which is equal to the ratio obtained by dividing the Consumer Price Index for the immediately preceding year by the Consumer Price Index for the recipient's base year.

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Adjustments:

The cost-of-living adjustments are subject to the following limitations:

- a. No adjustment shall be made for any year for which the adjustment would be less than 1% of the base allowance, and the adjustment for any year shall not exceed 6% of the base allowance.
- b. No monthly allowance in any year shall be less than the base allowance.
- c. No adjustment shall be made in any year in which the actuarial interest rate is less than 4.5%. The actuarial interest rate is currently 7.75%.
- d. No monthly allowance in any year may exceed an amount equal to the base allowance increased by 2% per year compounded for the number of years intervening between the end of the base year and the beginning of the calendar year in which the adjustment is made.

The 2% maximum increase applies to all retired and surviving members except that contracting agencies, may, at their option provide greater annual cost-of-living increases for their retired and surviving members in increments of 1% (from 2% to 5%) subject to the same limitations described above.

NOTE: Some of the provisions, which provided ad hoc benefit increases also, changed the base year. Section 21334 changed the base year for retired State members to the later of 1976 or the calendar year of retirement or death before retirement. Section 21320 further changed the base year for retired State members to the later of 1980 or the calendar year of retirement or death before retirement. Section 21324 changed the

## California Public Employees' Retirement System 2011 Cost-of-Living Report

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base year for retired school members to the later of 1977 or the calendar year of retirement or death before retirement. Section 21328 further changed the base year for school members to calendar year 1978 for annual adjustments of allowances increased by that Section. If a contracting agency adopts Section 21325, Section 21326, or Section 21327, the base year for annual adjustments of allowances increased by those Sections is: 1) the calendar year preceding the year of increase if the increase date is after April 1, or 2) the second calendar year preceding the year of increase if the increase date is on or before April 1. If a contracting agency adopts Section 21322, the base year for annual adjustments of allowances increased by that Section is 1980.

### 2. Automatic Annual Benefit Increases (Unlimited)

In 1984, the State Legislature approved a negotiated Second Tier of reduced retirement benefits for certain State Miscellaneous members (Chapter 674, Statutes of 1984). The corresponding State Industrial members were added in 1986 (Chapter 199, Statutes of 1986). Those affected include non-represented members and members of bargaining units that have entered into Memoranda of Understanding with the State Department of Personnel Administration. These members can choose between the First Tier plan and the Second Tier plan, which offers lower retirement benefits but eliminates member contributions.

Stats. 1984, Ch. 674, added Section 21330 which states "Notwithstanding anything to the contrary in this article, the monthly allowance of a person subject to Section 21076 shall be adjusted annually beginning with the second calendar year following retirement for time commencing on April 1 and payable on the first day of May. The adjusted monthly allowance shall be equal to the base allowance increased by 3 percent per year compounded for the number of years intervening between the end of the base year and the beginning of the calendar year in which the adjustment is made." Section 21076 contains the benefit formula for the Second Tier Plan.

### 3. Permanent Ad Hoc Cost-of-Living Benefit Increases

#### a. Retired State, School, and Contracting Agency Members

The following benefit increases were applied by law to retired State and school members:

Stats. 1968, Ch. 149, added Section 21251.75 which was repealed by Stats. 1972, Ch. 266. This section stated in part that "Every retirement allowance exclusive of that portion purchased by the member's accumulated additional contributions payable for time commencing on the effective date of this section to or on account of any member who has retired on or prior to December 31, 1966, is hereby increased by a monthly amount which, when added to any other increase in such retirement allowance made by the Legislature at its 1968 Regular Session equals the percentage of the retirement allowance set forth in the following table opposite the period during which the member's retirement became effective:

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<b>Period Retirement Became Effective</b>	<b>Percentage</b>
On or before December 31, 1961	12%
12 months ending December 31, 1962	10%
12 months ending December 31, 1963	8%
12 months ending December 31, 1964	6%
12 months ending December 31, 1965	4%
12 months ending December 31, 1966	2%

This section was available to contracting agencies until its repeal.

Stats. 1972, Ch. 1413; amended by Stats. 1977, Ch. 766 added Section 21222.1 which states in part that "In addition to the increase of allowance authorized by and granted pursuant to the provisions of Section 21313 and notwithstanding the limitation in subdivision (b) of Section 21329, the monthly allowance paid with respect to a person retired or a member who died on or before December 31, 1970, shall be adjusted by a 5% increase."

This section applies to contracting agencies that elected to be subject to the provisions of the section by amendment to their contract on or before December 31, 1978.

Stats. 1973, Ch. 1123; amended by Stats. 1977, Ch. 766 added Section 21222.2 which states in part that "In addition to the increase of allowance authorized by and granted pursuant to the provisions of Section 21222 and notwithstanding the limitation in subdivision (b) of Section 21329, the monthly allowance paid with respect to a person retired or a member who died during the period of January 1, 1971 to June 30, 1971, inclusive, shall be adjusted by a 5% increase." This section applies to contracting agencies that elected to be subject to the provisions of the section by amendment to their contract on or before December 31, 1978.

Stats. 1999, Ch. 555, added Section 21328 which states in part that "In addition to the increase in allowance authorized and granted pursuant to Section 21313, and notwithstanding the limitation on that increase imposed by this article and subdivision (b) of Section 21337, effective January 1, 2000, the monthly allowance paid with respect to a state or school member who retired or died prior to January 1, 2000, other than an allowance provided by Article 3 (commencing with Section 21570) of Chapter 14, shall be increased by the percentage set forth opposite the year of retirement or death in the following schedule:

<b>Period during which retirement or death occurred:</b>	<b>Percent age:</b>
24 months ending December 31, 1999	0.0%
12 months ending December 31, 1997	1.0%

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24 months ending December 31, 1996	2.0%
60 months ending December 31, 1994	3.0%
60 months ending December 31, 1989	4.0%
120 months ending December 31, 1984	5.0%
12 months ending December 31, 1974 or earlier	6.0%

Unlike the other ad hoc increases, this increase will **not** be included in the initial monthly allowance for purposes of determining the PPPA.

Beginning in the year 2000, this section also applies to contracting agencies that elect to be subject to the provisions of the section by amendment to their contract.

### b. Retired State and Contracting Agency Members

The following benefit increases were applied by law to retired State members, other than school members, and were available to local agencies by contract amendment:

Stats. 1975, Ch. 175, added Sections 21222.7. (21325 for Contracting Agencies)

Section 21325 states in part that "In addition to the increase in allowance authorized by and granted pursuant to the provisions of Section 21313, and notwithstanding the limitation on those increases imposed by this article, the monthly allowance paid with respect to a local member other than a school member, who retired or died prior to January 1, 1974, shall be increased by the percentage set forth opposite the period in the following table during which retirement became effective or death occurred:

<b>Period Retirement or Death Occurred</b>	<b>Percent age</b>
On or before December 31, 1965	15%
12 months ending December 31, 1966	14%
12 months ending December 31, 1967	13%
12 months ending December 31, 1968	12%
12 months ending December 31, 1969	9%
12 months ending December 31, 1970	6%
12 months ending December 31, 1971	5%
12 months ending December 31, 1972	4%
12 months ending December 31, 1973	3%

Stats. 1976, Ch. 341, added Section 21323 (21326 for Contracting Agencies) which states in part that "In addition to the increase in allowance authorized by and granted pursuant to the provisions of Section 21313, and notwithstanding the limitation on such increases imposed by this article, the monthly allowance paid with respect to a State member, other than a school member, who retired or died prior to July 1, 1974, shall be increased by the percentage set forth opposite the period in the following table during which retirement became effective or death occurred:

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<b>Period Retirement or Death Occurred</b>	<b>Percent age</b>
On or before December 31, 1965	7%
12 months ending December 31, 1966	6%
12 months ending December 31, 1967	5%
12 months ending December 31, 1968	4%
12 months ending December 31, 1969	3%
18 months ending June 30, 1971	2%
36 months ending June 30, 1974	1%

Stats. 1979, Ch. 1036, added Section 21327 which states in part that "In addition to the increase in allowance authorized and granted pursuant to provisions of Section 21313, and notwithstanding the limitation on such increases imposed by this article, effective January 1, 1980, or the date this section becomes applicable to the contracting agency, the monthly allowance paid with respect to a State or local member, other than a school member, who retired or died prior to January 1, 1975, shall be increased by the percentage set forth opposite the year of retirement or death in the following schedule:

<b>Period Retirement or Death Occurred</b>	<b>Percent age</b>
12 months ending December 31, 1967	1.51%
12 months ending December 31, 1968	1.26%
12 months ending December 31, 1969	1.86%
12 months ending December 31, 1970	2.55%
6 months ending June 30, 1971	1.91%
6 months ending December 31, 1971	7.05%
12 months ending December 31, 1972	6.76%
12 months ending December 31, 1973	4.45%
6 months ending June 30, 1974	.47%
6 months ending December 31, 1974	1.31%

Stats. 1981, Ch. 132, added Section 21320 which states in part that "In addition to the increase in allowance authorized by and granted pursuant to Section 21313, and notwithstanding the limitation on such increases imposed by this article, the monthly allowance paid with respect to a State member, other than a school member, who retired or died prior to January 1, 1981, shall be increased by 4 percent."

Stats. 1983, Ch. 475, added Section 21322 which states that "(a) Section 21320 shall apply to any contracting agency which makes an election pursuant to subdivision (b). (b) Subdivision (a) shall not apply to any contracting agency unless and until the contracting agency elects to be subject to subdivision (a) by amendment to its contract in the manner prescribed for approval of contracts, or in the case of contracts made

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after January 1, 1984, by express provision in the contract making the contracting agency subject to the provisions of subdivision (a)."

c. Retired State Members Only

Stats. 1977, Ch. 1186, added Section 21334 which states in part that "In addition to the increase in allowance authorized and granted pursuant to provisions of Section 21313, and notwithstanding the limitation on such increases imposed by this article, effective July 1, 1977, the monthly allowance paid with respect to a State member, other than a school member, who retired or died prior to January 1, 1976, shall be increased by 3% of the first four hundred dollars (\$400) of such allowance; provided, however, that no increase under this section shall exceed twelve dollars (\$12) per month."

d. Retired School Members

The following three benefit increases were applied by law to retired school members or retired local members formerly employed by a school district or a county superintendent of schools:

Stats. 1978, Ch. 1170, added Sections 21321 and 21324. Section 21321 states in part that "In addition to the increase in allowance authorized by and granted pursuant to the provisions of Section 21313, and notwithstanding the limitation on such increases imposed by this article, the monthly allowance paid with respect to a school member or a local member employed by a school district or a county superintendent of schools, and with respect to a school member, as defined in Section 20019.2, who retired or died prior to January 1, 1974, shall be increased by the percentage set forth opposite the period in the following table during which retirement became effective or death occurred:

<b>Period Retirement or Death Occurred</b>	<b>Percent age</b>
On or before December 31, 1965	15%
12 months ending December 31, 1966	14%
12 months ending December 31, 1967	13%
12 months ending December 31, 1968	12%
12 months ending December 31, 1969	9%
12 months ending December 31, 1970	6%
12 months ending December 31, 1971	5%
12 months ending December 31, 1972	4%
12 months ending December 31, 1973	3%

Section 21324 states in part that "In addition to the increase in allowance authorized by and granted pursuant to the provisions of Section 21313, and notwithstanding the limitation on such increases imposed by this article, the monthly allowance paid with

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respect to a school member or a local member employed by a school district or a county superintendent of schools, and with respect to a school member, as defined in Section 20019.2, who retired or died prior to July 1, 1974, shall be increased by the percentage set forth opposite the period in the following table during which retirement became effective or death occurred:

<b>Period Retirement or Death Occurred</b>	<b>Percent age</b>
On or before December 31, 1965	7%
12 months ending December 31, 1966	6%
12 months ending December 31, 1967	5%
12 months ending December 31, 1968	4%
12 months ending December 31, 1969	3%
18 months ending June 30, 1971	2%
36 months ending June 30, 1974	1%

Stats. 1979, Ch. 1036, added Section 21328 which states in part that "In addition to the increase in allowance authorized and granted pursuant to the provisions of Section 21313 and notwithstanding the limitation on such increases imposed by this article, effective January 1, 1980, the monthly allowance paid with respect to a school member or local member employed by a school district or a county superintendent of schools who retired or died prior to July 1, 1975, shall be increased by the percentage set forth opposite the year of retirement or death in the following schedule:

<b>Period Retirement or Death Occurred</b>	<b>Percent age</b>
12 months ending December 31, 1966	.62%
12 months ending December 31, 1967	3.21%
12 months ending December 31, 1968	2.97%
12 months ending December 31, 1969	3.57%
12 months ending December 31, 1970	4.26%
6 months ending June 30, 1971	3.62%
6 months ending December 31, 1971	8.86%
12 months ending December 31, 1972	8.57%
12 months ending December 31, 1973	6.22%
6 months ending June 30, 1974	2.16%
6 months ending December 31, 1974	3.00%

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4. The Former Boatwright Benefit

Stats. 1980, Ch. 1244, added and repealed Section 21231, which required the transfer of all funds in the reserve for deficiencies maintained in the Public Employees' Retirement Fund in excess of 2% of its total assets, for purposes of quarterly increases, as specified by the Board of Administration of the Public Employees' Retirement System, in the monthly allowances from October 1, 1980, through September 30, 1982, whenever the Board determined that sufficient funds exist for this purpose. Section 21231 was to remain in effect only until January 1, 1983, and was to be repealed as of such date, unless a later enacted statute deleted or extended its provisions to a later date.

"21231. (a) The board shall transfer an amount of the reserve for deficiencies retained in the retirement fund pursuant to Section 20203 which exceeds 2 percent of the total assets of the retirement fund into a special account which shall be used for the sole purpose of providing quarterly increases from

October 1, 1980, through September 30, 1982, as specified by subdivision (d), in the monthly allowance of every retired person or survivor or beneficiary of a State or local member or retired person, who was eligible to receive any allowance on December 31, 1979, notwithstanding the limitations on such increases imposed by this article and in addition to any other adjustment made pursuant to this article.

(b) The amount specified in subdivision (a) is hereby appropriated to the board without regard to fiscal years. Whenever the board determines that there are sufficient funds in the special account created pursuant to subdivision (a), the board shall apply such funds to the increases authorized by this section. If the funds in the special account are not sufficient to pay the increases prescribed in subdivision (d), the board shall proportionately reduce all payments. All funds remaining in the special account on January 1, 1983 shall be transferred back to the reserve for deficiencies.

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(c) The board shall inform each recipient of benefits under subdivision (a) that the increases are not cumulative and shall not be included in their base allowance and may be available for only a limited period of time.

(d) The total quarterly increases shall be 10 percent of the quarterly allowance payable to an annuitant or eligible survivor or beneficiary on October 1, 1980. The board, on October 1, 1980 and, upon the commencement of each quarter thereafter, shall pay the benefit provided by this section for the succeeding quarter."

Stats. 1982, Ch. 330, added Section 21336, which stated: "(a) The board shall transfer the sum of one hundred thirty million dollars (\$130,000,000) from the reserve for deficiencies retained in the retirement fund pursuant to Section 20174 into a special account which is appropriated to the board without regard to fiscal years, for use for the sole purpose of providing quarterly increases from October 1, 1982, through September 30, 1984, as specified in subdivision (d), in the monthly allowance of every retired person or survivor or beneficiary of a State or local member or retired person, who was eligible to receive any allowance on December 31, 1979, or who receives a benefit as a result of a retired member who was eligible to receive an allowance on December 31, 1979, notwithstanding the limitations on those increases imposed by this article and in addition to any other adjustment made pursuant to this article.

(b) Whenever the board determines that there are sufficient funds in the special account created pursuant to subdivision (a), the board shall apply those funds to the increases authorized by this section. If the funds in the special account are not sufficient to pay the increases prescribed in subdivision (d), the board shall proportionately reduce all payments.

(c) The board shall inform each recipient of benefits under subdivision (a) that the increases are not cumulative and shall not be included in their base allowance and may be available for only a limited period of time.

(d) The total quarterly increases, payable for the period from October 1, 1982, to September 30, 1984, shall be 10 percent of the quarterly allowance payable to an

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annuitant or eligible survivor or beneficiary on October 1, 1980. The board, on October 1, 1982, and, upon the commencement of each such quarter thereafter, shall pay the benefit provided by this section for the succeeding quarter."

5. Supplemental Cost-of-Living Increases

AB 702 also repealed statutes authorizing the Investment Dividend Disbursement (IDDA) and Extraordinary Performance Dividend Account (EPDA) programs and replaced them with a new Purchasing Power Protection Allowance (PPPA).

a. The Former IDDA Benefit

This program was introduced in Government Code Section 21235. It was revised by amendments to this section and by the addition of Government Code Section 21237. These statutes are included below.

"21235. (a) The board shall establish an Investment Dividend Disbursement Account in the retirement fund consisting of that amount of the earnings of the retirement fund which remains after the sequential application of Sections 20173, 20174, and 20799. The board shall establish in the retirement fund such Purchasing Power Accounts, based on relative purchasing power, as the board deems necessary, which Purchasing Power Accounts shall consist of the amount of earnings of the retirement fund determined pursuant to Section 21237.

(b) The Investment Dividend Disbursement Account may be utilized, as specified in subdivision (e), to increase all monthly allowances paid by the system to an amount equal to a maximum of 75 percent of the purchasing power, as determined by the board, of the initial monthly allowances that were received by every retired person or survivor or beneficiary of a State, school or local member or retired person who was eligible to receive any allowance at the end of each fiscal year. If sufficient funds are not available within a Purchasing Power Account to adjust allowances to a maximum of 75 percent of purchasing power, the board may transfer funds maintained in the Investment Dividend Disbursement Account to the Purchasing Power Account to provide for the increases authorized by this section. If sufficient funds are not available in any particular Purchasing Power Accounts to adjust allowances to a maximum of 75 percent of purchasing power, the board may adjust allowances to eligible recipients by a lesser amount. The board may, for reasons of insufficient funds, determine that no increase under this section shall be made.

(c) The amount specified in subdivision (a) is hereby appropriated from the Investment Dividend Disbursement Account and from such Purchasing Power Accounts as have been established to the board without regard to fiscal years. Whenever the board determines that there are sufficient funds the board shall apply those funds to the increases authorized by this section.

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(d) The board shall inform each recipient of benefits under subdivision (b) that the increases are not cumulative, not part of the base retirement allowance, and may be available for only a limited period of time and that the board may discontinue the increases.

(e) The board, on January 1, 1984, and, upon the commencement of each quarter thereafter, shall pay the benefit provided by this section for the succeeding quarter."

Stats. 1982, Ch. 671, added Section 21236 to the Government Code

"21236. (a) The board shall pay, on October 1, 1984, and at the beginning of each succeeding calendar year, from any funds in a Purchasing Power Account not then needed for the purposes of Section 21235, the amount required for the purposes of this section, which is appropriated to the board without regard to fiscal years, for use for the sole purpose of providing quarterly increases as specified in subdivision (d) in the monthly allowance of every person who was eligible to receive the 10 percent quarterly increase provided by Section 21232 on September 30, 1984.

(b) Whenever the board determines that there are sufficient funds in a Purchasing Power Account, the board shall apply those funds to the increases authorized by this section. If the funds in a Purchasing Power Account are not sufficient to pay the increases prescribed in subdivision (d), the board shall proportionally reduce all payments.

(c) The board shall inform each recipient of benefits under subdivision (a) that the increases are not cumulative and shall not be included in their base allowance and may be available for only a limited time.

(d) The total quarterly increases payable shall be the difference between the July 1, 1984, 10 percent quarterly payment under Section 21336 and the amount payable under Section 21235 at the time a payment under this section would be made. Whenever the amount payable under Section 21235 is equal to or greater than the amount payable under Section 21336 on July 1, 1984, there shall be no amount payable under this section." These statutes, authorizing the Former Boatwright Benefit, were repealed by AB 702 (statutes of 1991, Ch. 83), effective June 30, 1991."

Stats. 1985, Ch. 1495, added Section 21237 to the Government Code

"21237. (a) Notwithstanding any other provision of this part, effective January 1, 1986, the Investment Dividend Disbursement Account shall consist of an amount not to exceed the amount of the funds transferred from the Reserve for Deficiencies to the Investment Dividend Disbursement Account on June 30, 1983, less the amount of investment earnings attributable to member accounts for fiscal year 1982-83, plus future account earnings. The board shall annually credit interest to the account at the same crediting rate used to credit retired member reserves. The board may utilize the earnings on the account attributable to the period from June 30, 1983 through June 30,

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1985, to credit contributions of members in the retirement fund. That additional interest crediting shall not exceed one percent of the balances in member accounts. Transfers authorized by the board pursuant to subdivision (b) of Section 21235 shall reduce the maximum allowable account balance by the amount transferred.

(b) All other funds available pursuant to Section 21235 shall be retained in Purchasing Power Accounts. The board shall annually transfer from the Purchasing Power Accounts any funds in excess of the amounts disbursed pursuant to Section 21235 and 21236 in the four previous fiscal years, as provided in subdivision (c). Of the amount so transferred, an amount not to exceed the amount disbursed from the Purchasing Power Accounts in the immediately preceding fiscal year shall be transferred to the appropriate retired member accounts, as determined by the board; and the residual amount shall be transferred to the Extraordinary Performance Dividend Account.

(c) The board shall annually determine, pursuant to subdivision (c) of Section 21311, the extent to which the purchasing power of benefits provided by the system has decreased. The board shall annually transfer from the Purchasing Power Accounts, as provided in subdivision (b), any funds in excess of those disbursed pursuant to Sections 21235 and 21236 for the four previous fiscal years."

b. The Former EPDA Benefit

This program was introduced in Government Code Section 21238.

Stats. 1988, Ch. 1356, added Government Code Section 21238

"21238. (a) The board shall establish an Extraordinary Performance Dividend Account in the Retirement Fund consisting of the amount of earnings of the Retirement Fund transferred from the Purchasing Power Accounts pursuant to Section 21237.

(b) The board shall from time to time on or after January 1, 1991, but only in a fiscal year in which the purchasing power of all persons receiving payments from the Purchasing Power Accounts is 75 percent, disburse, not more frequently than quarterly, extraordinary performance dividend payments to those retired persons and those survivors and beneficiaries of State, school and local members and retired persons whose allowances, after applying the annual cost-of-living adjustments and all other increases in allowances required or authorized by this part, have the lowest purchasing power percentage, based on the amount that would be paid had the original allowance been increased by increases in the Consumer Price Index, as defined by subdivision (c) of Section 21311, increasing those allowances to a common minimum purchasing power level. The payments shall be paid by a separate identifiable warrant.

(c) The amount specified in subdivision (a) is hereby appropriated from the Extraordinary Performance Dividend Account to the board without regard to fiscal years. Whenever the board determines that there are sufficient funds in the Extraordinary

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Dividend Account, the board shall apply that portion of those funds deemed prudent by the board to any payments authorized by this section.

(d) The board shall inform each recipient of benefits under subdivision (b) that the payments are not cumulative, not part of the base retirement allowance, and may be available only as a result of extraordinary investment returns to the system."

c. The Purchasing Power Protection Allowance (PPPA) Benefit

This program was introduced in Government Code Section 20178 and 21337.

Stats. 1991, Ch. 83, added Section 20178 to the Government Code

"20178. (a) Notwithstanding any other provision of this part, any member of this system who is paid his or her accumulated contributions shall receive the sum of all accumulated contributions credited to his or her account. The accumulated contributions shall include: (1) the interest which had been credited to the member's account prior to the effective date of this section; plus (2) the contributions and interest which had been credited after the effective date of this section at an interest rate of 6 percent annually compounded.

(b) The interest amount which would have been otherwise credited to the member's account on or after the effective date of this section, but for the return of the member's accumulated contributions, shall be transferred to the account established by the board under Section 21337 to fund the purchasing power protection allowance."

Statutes 1991, Chapter 83, repealed Section 21235

Stats. 1991, Ch. 83, added Section 21337 to the Government Code

SEC 36, Section 21337 is added to the Government Code, to read:

"21337. (a) On an annual basis, the board shall transfer the lesser of: (1) the amount necessary to increase all monthly allowances paid by the system to 75 percent of the purchasing power of the initial monthly allowances; or (2) up to 1.1 percent of the net earnings on member contributions, as determined by Section 20178, to a supplemental account.

(b) The funds so transferred to the supplemental account shall be utilized to increase all monthly allowances paid by the system up to a maximum of 75 percent of the purchasing power, as determined by the actuary, of the initial monthly allowances that were received by every retired person or survivor or beneficiary of a State, school or local member or retired person who was eligible to receive any allowance at the end of each fiscal year. Funds remaining in the account after the payment of benefits under this section shall be transferred to the employer accounts."

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**Statutes 1991, Chapter 83, repealed Section 21236**

Stats. 2000, Ch. 483, amended Sections 20178 and 21337 to exclude contracting agency members, and added Section 21337.1 to the Government Code

"21337.1. (a) As of January 1, 2001, and annually thereafter, all monthly allowances paid by the system to retirees of contracting public agencies, and to survivors and beneficiaries of members and retirees of those agencies, shall be increased to 80 percent of the purchasing power of the initial monthly allowance as determined by the board.

(b) Notwithstanding subdivision (a), retirees of contracting public agencies, and survivors and beneficiaries of members and retirees of those agencies, who receive a monthly allowance payable by this system shall also receive, on or after January 1, 2001, a one-time lump-sum payment in an amount equal to the difference, if any, between the purchasing power protection allowance paid between January 1, 2000, and December 31, 2000, and the purchasing power protection allowance that would have been payable if this section had been operative during that period.

(c) The cost of the increase in allowances paid pursuant to subdivisions (a) and (b) shall be paid from the same assets of the employer used in the determination of each employer contribution rate for each membership classification under which service was credited that affects the allowance calculation of the retirees, survivors, or beneficiaries."

**6. Survey of COLA Programs in Public Systems**

A copy of Part V of the "2006 Comparative Study of Major Public Employee Retirement Systems" as prepared by the State of Wisconsin Retirement Research Committee can be found at the end of this COLA report. Special thanks to William Ford, Senior Staff Attorney for permission to reprint their report.

The majority of PERS in this study enacted some type of automatic post-retirement adjustment plan during the 1970's and 1980's. Most of these "COLA plans" are based upon changes in the CPI, with some type of annual limit to control costs. Some of these COLA plans are pre-funded during the working career, while others are not. A copy of the full study can be found at:

<http://www.legis.state.wi.us/lc/jlc03/02wrsreport.pdf> . All section references in this report are to the Government Code.

## **2010 COMPARATIVE STUDY OF MAJOR PUBLIC EMPLOYEE RETIREMENT SYSTEMS**

## PART V

# POST-RETIREMENT ANNUITY INCREASES AND TAXES

### A. INTRODUCTION

Chart 5, on pages 33 and 34, shows the provisions of each plan for increasing retirement annuities after an employee has retired. Chart 5 also shows how annuity payments from each plan are treated under that state's income tax laws. In addition, benefit adjustments in the Social Security program over the last 10 years and income taxation of Social Security benefits are also discussed in this part.

### B. SOCIAL SECURITY

Pension designers are concerned with the adequacy of benefits at the time of retirement and also with the continuing purchasing power of those benefits during retirement as affected by inflation. Since 1975, Social Security benefits have been automatically adjusted each year by the percentage increase in the consumer price index (CPI). The increases in Social Security benefits for each of the last 10 years are shown below and displayed in Figure 10, *Social Security CPI % Adjustments 2000 to 2011*:

<u>CPI Year</u>	<u>Date on Which First Payable</u>	<u>Percentage Increase</u>
2000	1/1/2001	3.5%
2001	1/1/2002	2.6%
2002	1/1/2003	1.4%
2003	1/1/2004	2.1%
2004	1/1/2005	2.7%
2005	1/1/2006	4.1%
2006	1/1/2007	3.3%
2007	1/1/2008	2.3%
2008	1/1/2009	5.8%
2009	1/1/2010	0.0%
2010	1/1/2011	0.0%
2011	1/1/2012	3.6%

For those employees in the 70 of the 87 plans in this report (80%) that are also covered by the Social Security program, at least that portion of their total retirement income that is received from Social Security automatically keeps pace with inflation.

Under federal law, up to 50% of Social Security benefits are subject to income taxation if the taxpayer's adjusted gross income is between \$25,000 and \$34,000 for single taxpayers or between \$32,000 and \$44,000 for married taxpayers filing a joint income tax return. If a taxpayer's income exceeds these levels, then 85% of his or her Social Security benefits are subject to federal income taxation.

State income taxation of Social Security benefits varies. Twenty-eight states completely exempt Social Security benefits from income taxation. Thirteen states impose income taxes on all or a portion of Social Security benefits and nine states have no personal income tax or a very limited personal income tax that does not affect Social Security payments.

## C. POST-RETIREMENT ANNUITY COST-OF-LIVING ADJUSTMENTS

Most of the plans in this report have provisions for post-retirement annuity adjustments to protect the purchasing power of annuities against inflation. The provisions of each of the plans are described in the fourth column of Chart 5. The following table summarizes and compares the post-retirement annuity adjustment provisions found in the 2008 Report against those found in the 2010 Report:

	<u>2008</u>	<u>2010</u>
Adjustments indexed to CPI	35 plans	28 plans
Automatic percentage increase	26 plans	29 plans
Investment surplus	5 plans	5 plans
Ad hoc (any increase must be authorized by Legislature or a decision-making board) or money purchase	19 plans	19 plans
No increase	2 plans	6 plans
<b>TOTAL</b>	<b>87 plans</b>	<b>87 plans</b>

Note that, as shown in Chart 5, many of the plans in which post-retirement annuity increases are indexed to the CPI also include a cap on the total percentage adjustment that may be made within any given year. Also, many of the plans in which post-retirement annuity increases are indexed to the CPI or are automatic also include provisions for additional annuity adjustments if there are investment surpluses in the retirement fund. Nineteen of the 87 plans are either money purchase plans or provide post-retirement annuity increases only on an "ad hoc" basis, where either the Legislature or a decision-making board determines whether, and when, a post-retirement annuity increase is granted. See Figure 11, *2010 Cost of Living Adjustments (COLA)*, for a graphical representation.

## D. STATE INCOME TAXATION OF ANNUITIES

The last column of Chart 5 shows the treatment of pension benefits under each of the plans by the state income tax laws in effect in that state. In 21 of the 87 plans, pension benefits are subject to state income taxation and no specific amount of retirement benefits is tax exempt. Also, in 21 of the 87 plans, pension benefits are totally exempt from state income taxation. Eleven of the plans are in states with no income taxation.

Caution must be used in interpreting the information in the last column of Chart 5. In many of the states in which pension income is fully taxable, other provisions of state income tax laws may ameliorate or completely eliminate the effect of the state income tax laws on retirees. For example, some state income tax laws have a level of exemptions, deductions, or tax credits that substantially reduce or eliminate state income taxation for persons at certain income levels. Also, in addition, some of these exemptions, deductions, or tax credits may be increased for taxpayers who have reached a certain age. In these states, the level of income taxation on retirees may be

equal to or less than that in states where public employee pension income is exempt from state income taxation.

## E. TRENDS

Most of the plans in this report have adopted provisions in which retirement annuities are annually increased, either by a set percentage or in response to changes in the CPI. These provisions were mostly adopted in the 1970s and 1980s, in response to the high inflation that occurred in those years.

## F. THE WRS

Retirees in the WRS whose annuities are paid from the “core” fund receive annual annuity adjustments tied to whether reserve surpluses in the fund, as adjusted by a formula, are sufficient to generate an increase. In addition, the annual adjustment may result in a reduction of annuities if investment losses are severe, particularly if investment losses occur over a number of consecutive years. However, annuities paid from the “core” fund may not be reduced below the level initially paid to a retiree. For annuities paid in 2010, the annuity adjustment in the core fund was -1.2%.

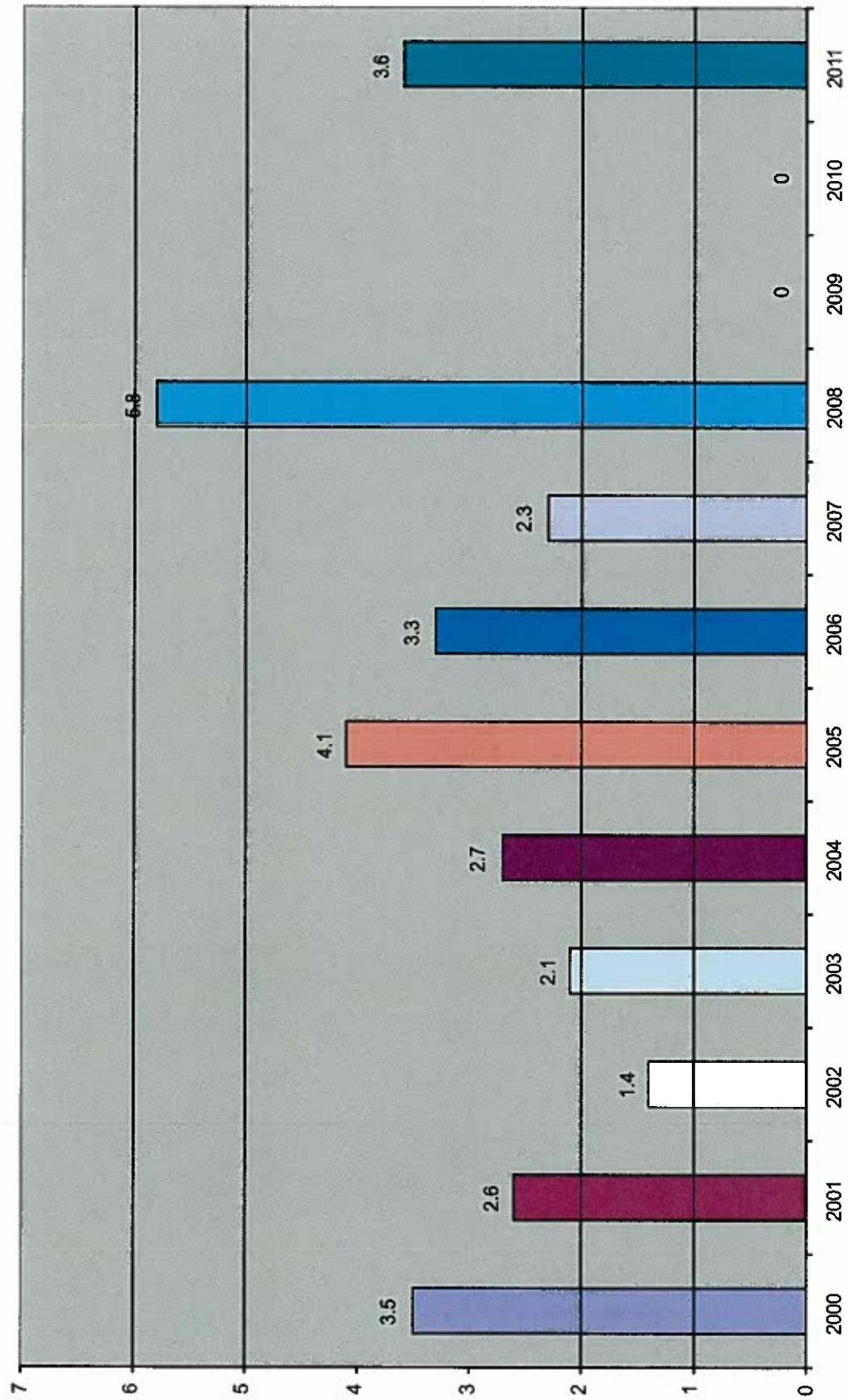
WRS retirement benefits are subject to state income taxation except for certain payments made with respect to persons who were employees prior to 1964 or who had retired prior to 1964. Income from Social Security is exempt from Wisconsin income taxes. In addition, up to \$5,000 per year of income from qualified retirement plans is exempt from Wisconsin income taxes for taxpayers with an adjusted gross income of \$15,000 or less (\$30,000 for married joint filers) who are 65 or older.

CHART V  
POST-RETIREMENT INCREASES AND STATE TAX PROVISIONS

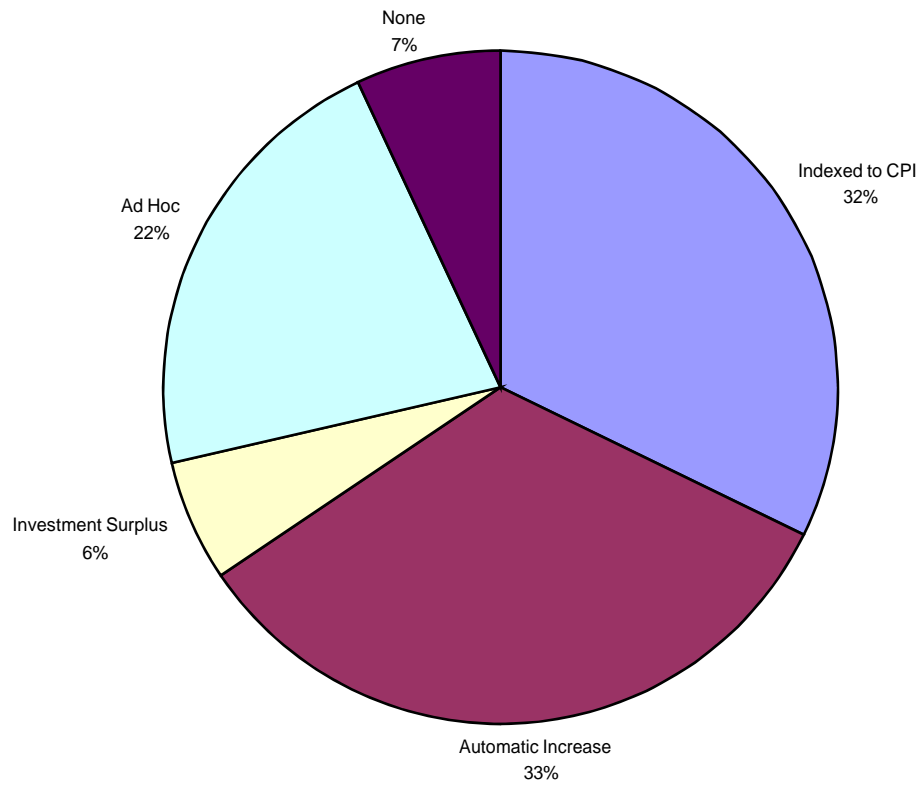
<u>State</u>	<u>Fund Name</u>	<u>Social Security</u>	<u>Annual Post-Retirement Increases</u>	<u>State Taxation of PERS Benefits</u>
1 Alabama	ERS	Yes	Ad hoc only	Benefits exempt
2 Alabama	TRS	Yes	Ad hoc only	Benefits exempt
3 Alaska	PERS	No	N/A: acct balance + invest earnings	No income tax
4 Alaska	TRS	No	N/A: acct balance + invest earnings	No income tax
5 Arizona	SRS	Yes	Excess earnings - 4% cap	Exempt to \$2,500
6 Arkansas	PERS	Yes	3%	Exempt to \$6,000
7 Arkansas	TRS	Yes	3%	Exempt to \$6,000
8 California	PERS	Yes	2% max based on CPI	Benefits taxable
9 California	TRS	No	2%	Benefits taxable
10 Colorado	PERA	No	Lesser of 2% or CPI-W	Exempt to \$20,000/\$24,000
11 Connecticut	SERS	Yes	60% of CPI up to 6%, 2.5% minimum	Benefits taxable
12 Connecticut	TRS	No	2%	Benefits taxable
13 Delaware	SEPP	Yes	Ad hoc only	Exempt to \$12,500
14 Florida	FRS	Yes	3%	No income tax
15 Georgia	ERS	Yes	Ad hoc-based on CPI	Exempt to \$40,000
16 Georgia	TRS	Yes	Ad hoc-based on CPI	Exempt to \$40,000
17 Hawaii	ERS	Yes	2.5%	Benefits exempt
18 Idaho	PERS	Yes	CPI - 1% minimum to 6% max (conditional)	Benefits taxable
19 Illinois	SRS	Yes	3% or 1/2 of CPI	Benefits exempt
20 Illinois	TRS	No	3%	Benefits exempt
21 Illinois	MRF	Yes	3%	Benefits exempt
22 Indiana	PERF	Yes	Ad hoc only (1.5% presumed)	Benefits taxable
23 Indiana	TRF	Yes	Ad hoc only (1% presumed)	Benefits taxable
24 Iowa	PERS	Yes	Excess earnings - CPI; 3% cap	Exempt to \$6,000, \$12,000 married
25 Kansas	PERS	Yes	2%	Benefits exempt
26 Kentucky	KERS	Yes	1.5%	Exempt to \$41,110
27 Kentucky	CERS	Yes	1.5%	Exempt to \$41,110
28 Kentucky	TRS	No	1.5%	Exempt to \$41,110
29 Louisiana	SERS	No	Excess earnings; CPI; 3% cap	Benefits exempt
30 Louisiana	TRSL	No	Excess earnings	Benefits exempt
31 Maine	SRS	No	CPI - 4% cap	Exempt to \$6,000
32 Maryland	SRS	Yes	CPI - 3% cap	Exempt to \$23,600
33 Massachusetts	SERS	No	CPI - on 1st \$12,000-conditional, 3% cap	Benefits exempt
34 Massachusetts	TRS	No	CPI - on 1st \$12,000-conditional, 3% cap	Benefits exempt
35 Michigan	SERS	Yes	3% (\$300 annual cap)	Benefits exempt
36 Michigan	MERS	Yes	3 plans - depending on employer agreement (generally 2.5%)	Benefits exempt
37 Michigan	PSERS	Yes	3%	Benefits exempt
38 Minnesota	MSRS	Yes	2.5%	Benefits taxable
39 Minnesota	PERA	Yes	1%	Benefits taxable
40 Minnesota	TRA	Yes	2%	Benefits taxable
41 Mississippi	PERS	Yes	3%	Benefits exempt
42 Missouri	SERS	Yes	80% CPI - 5% cap	Exempt to \$33,703

43	Missouri	LAGERS	Yes	CPI - 4% cap	Exempt to \$33,703
44	Missouri	PSRS	No	CPI - 5% cap; 80% of original benefits lifetime cap	Exempt to \$33,703
45	Montana	PERS	Yes	1.5%	Exempt to \$3,600
46	Montana	TRS	Yes	1.5%	Exempt to \$3,600
47	Nebraska	SERS	Yes	2.5%	Benefits taxable
48	Nebraska	CERS	Yes	2.5%	Benefits taxable
49	Nebraska	SPP	Yes	CPI - 2.5% cap	Benefits taxable
50	Nevada	PERS	No	2 to 5%	No income tax
51	New Hampshire	NHRS	Yes	Ad hoc	Benefits exempt
52	New Jersey	PERS	Yes	Suspended	Exempt to \$15,000/\$20,000
53	New Jersey	TPAF	Yes	Suspended	Exempt to \$15,000/\$20,000
54	New Mexico	PERA	Yes	3%	\$2,500 exempt
55	New Mexico	ERA	Yes	50% of CPI - 2% min; 4% cap	\$2,500 exempt
56	New York	ERS	Yes	50% of CPI, max 3% on 1st \$18,000	Benefits exempt
57	New York	TRS	Yes	50% of CPI, max 3% on 1st \$18,000	Benefits exempt
58	North Carolina	TSERS	Yes	Ad hoc	Exempt to \$4,000/\$8,000
59	North Carolina	LGERS	Yes	Ad hoc	Exempt to \$4,000/\$8,000
60	North Dakota	PERS	Yes	Ad hoc	Benefits taxable
61	North Dakota	TRF	Yes	Ad hoc	Benefits taxable
62	Ohio	PERS	No	3%	Benefits taxable
63	Ohio	STRS	No	3%	Benefits taxable
64	Oklahoma	PERS	Yes	Ad hoc	Exempt to \$10,000
65	Oklahoma	TRS	Yes	Ad hoc	Exempt to \$10,000
66	Oregon	PERS	Yes	CPI - 2% cap	Benefits taxable
67	Pennsylvania	SERS	Yes	Ad hoc	Benefits exempt
68	Pennsylvania	PSERS	Yes	Ad hoc	Benefits exempt
69	Rhode Island	ERS	Yes	CPI - 3% cap	Benefits taxable
70	South Carolina	SCRS	Yes	CPI - 2% cap	\$15,000 deduction
71	South Dakota	SRS	Yes	3.1% (sliding scale)	No income tax
72	Tennessee	CRS	Yes	CPI - 3% cap	Benefits exempt for income under \$16,200/\$27,000
73	Texas	ERS	Yes	Ad hoc	No income tax
74	Texas	TRS	No	Ad hoc	No income tax
75	Texas	MRS	Yes	Up to 70% of CPI (ad hoc)	No income tax
76	Utah	SRS	Yes	CPI - 4% cap	Exempt to \$7,500/\$15,000
77	Vermont	SRS	Yes	50% of CPI - 5% cap	Benefits taxable
78	Vermont	TRS	Yes	50% of CPI - 5% cap	Benefits taxable
79	Virginia	SRS	Yes	CPI - 5% cap	Deduction up to \$12,000
80	Washington	PERS	Yes	CPI - 3% cap	No income tax
81	Washington	TRS	Yes	CPI - 3% cap	No income tax
82	West Virginia	PERS	Yes	No	Exempt to \$2,000
83	West Virginia	TRS	Yes	No	Exempt to \$2,000
84	Wyoming	WRS	Yes	CPI - 3% cap	No income tax
85	Milwaukee	City	Yes	CPI - 3% cap	Limited exemptions
86	Milwaukee	County	Yes	2%	Limited exemptions
87	Wisconsin	WRS	Yes	Investment earnings; reductions possible	Limited exemptions

Figure 10. Social Security CPI % Adjustments 2000 to 2011



**Figure 11. 2010 Cost of Living Adjustments**



## PART VI

### ACTUARIAL AND ACCOUNTING INFORMATION

#### A. INTRODUCTION

Chart 6, on pages 40 and 41, provides selected actuarial and accounting information about each of the plans in the report. This part of the report discusses the actuarial method used by each of the plans, provides the interest assumption, wage inflation assumption, and economic spread for each of the plans, and provides the Governmental Accounting Standards Board (GASB) 25 funding ratio for each of the plans in 2010.

#### B. ACTUARIAL METHODS

The third column in Chart 6 lists the actuarial methods used by each of the 87 plans. An actuarial method is a procedure for determining the present value of pension benefits that will be paid in the future and allocating that value and the cost of the benefits to specific time periods. There are a number of accepted actuarial methods that presumably will reach the goal of fully funding all pension obligations as they become due, but they allocate costs in different ways during the period of employment of participants in the plan.

Sixty-nine, or 79%, of the 87 plans use the entry age actuarial method; 12, or 14%, of the 87 plans use the unit credit method; four, or 5%, of the 87 plans use the aggregate cost method or other methods.

#### C. INTEREST ASSUMPTION

The interest assumption, which is also sometimes referred to as the “earnings assumption,” is one of the key economic assumptions in determining the level of contribution rates. The fourth column in Chart 6 provides the interest assumption for each of the 87 plans in the report. This information is compared with previous reports in the following table:

<u>Interest Assumption</u>	<u>2000</u>	<u>2004</u>	<u>2006</u>	<u>2008</u>	<u>2010</u>
From 5% to 7%	1 plan	1 plan	1 plan	1 plan	4 plans
Over 7% to 8%	56 plans	59 plans	61 plans	63 plans	65 plans
Over 8%	27 plans	24 plans	23 plans	21 plans	16 plans
Not determined or not applicable	1 plan	1 plan	0 plans	2 plans	2 plans
<b>TOTAL</b>	85 plans	85 plans	85 plans	87 plans	87 plans

See Figure 12, *2010 Plan Interest Assumptions*, for a graphical representation of current data.

## D. ECONOMIC SPREAD

Another key economic assumption in pension planning is the assumption of the wage inflation rate or general salary increases in excess of those provided for merit or seniority. The difference between the wage inflation assumption and the interest assumption is often referred to as the “economic spread,” which is the assumed real rate of return on invested assets above the wage inflation rate. The fifth and sixth columns of Chart 6 show the wage inflation assumptions and the resultant economic spread for each of the plans in the report.

## E. FUNDING RATIO

Until 1995, the GASB required public pension plans to disclose the “pension benefit obligation,” which is a measure of the present value of pension benefits, adjusted for the affects of projected salary increases. The pension benefits were estimated only on service earned by employees up to the date of the estimate.

GASB 25, issued in November 1994, requires that for funding disclosures beginning with periods after June 15, 1996, the funding disclosures be based upon regular actuarial valuations. Included in the requirements under GASB 25 is a “schedule funding progress that reports the actuarial value of assets, the actuarial accrued liability and the relationship between the two over time....”

The following table summarizes the funding ratios for each of the plans in the 2010 Report and compares them with the 2008, 2006, 2004, and 2000 Reports.

<b>Funding Ratio</b>	<b>2000</b>	<b>2004</b>	<b>2006</b>	<b>2008</b>	<b>2010</b>
More than 100%	33 plans	9 plans	7 plans	10 plans	4 plans
90% to 100%	22 plans	28 plans	21 plans	19 plans	11 plans
80%, but less than 90%	14 plans	19 plans	20 plans	18 plans	23 plans
70%, but less than 80%	5 plans	15 plans	17 plans	24 plans	16 plans
60%, but less than 70%	1 plan	7 plans	11 plans	6 plans	17 plans
50%, but less than 60%	1 plan	3 plans	3 plans	6 plans	7 plans
Less than 50%	3 plans	2 plans	3 plans	2 plans	7 plans
Not determined	6 plans	2 plans	3 plans	2 plans	2 plans
<b>TOTAL</b>	<b>85 plans</b>	<b>85 plans</b>	<b>85 plans</b>	<b>87 plans</b>	<b>87 plans</b>

See Figure 13, *2010 Plan Funding Ratios*, for a graphical representation of current data.

## F. TRENDS

Funding ratios of more than 100% have decreased substantially since the 2000 Report, reflecting the general decline in earnings that occurred during the period, including a significant decrease between 2008 and 2010. Thirty-three plans had funding ratios in excess of 100% in 2000, but only four plans had funding ratios in excess of 100% in 2010. Overall funding has also decreased significantly, only 17% of the plans studied had funding ratios of 90% or more in 2010. The average funding ratio in 2010 fell from 81% in 2008 to 73.4% in 2010. There was a significant increase in plans that are less than 50% funded (5) as well.

The entry age method is still the predominant method used by the plans studied.

## G. THE WRS

The actuarial method used by the WRS is entry age. The interest assumption for 2010 was lowered to 7.2% from the former 7.8% and the “economic spread” is currently 3.2%.

For 2010, the funding ratio for the WRS was 99.8%, which was significantly higher than the average funding ratio of 73.4% for all plans studied.

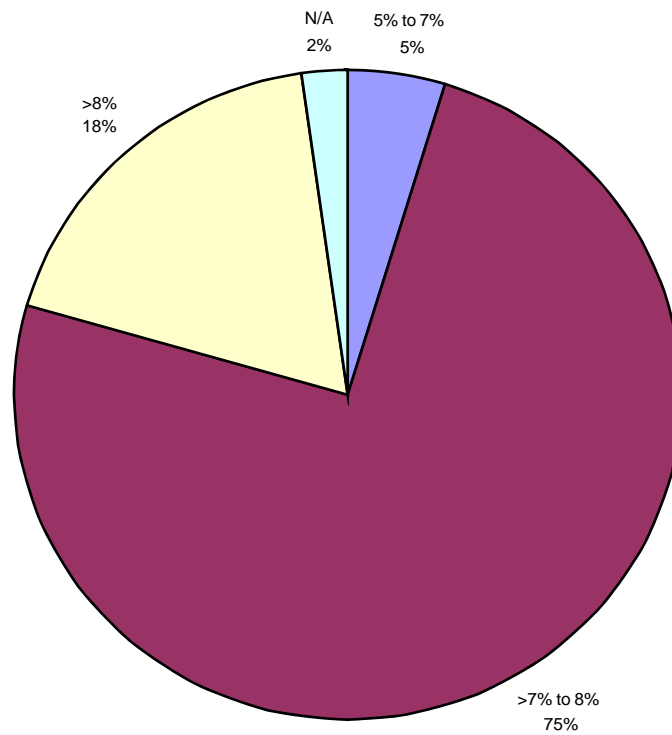
CHART VI  
ACTUARIAL AND ACCOUNTING PROVISIONS

	<u>State</u>	<u>Fund Name</u>	<u>Actuarial Method</u>	<u>Interest Assumption</u>	<u>Wage Inflation</u>	<u>Economic Spread</u>	<u>Funded Ratio</u>
1	Alabama	ERS	Entry age	8.00%	4.50%	3.50%	68.20%
2	Alabama	TRS	Entry age	8.00%	4.50%	3.50%	71.10%
3	Alaska	PERS	N/A	N/A	N/A	N/A	N.D.
4	Alaska	TRS	N/A	N/A	N/A	N/A	N.D.
5	Arizona	SRS	Unit credit	8.00%	3.75%	4.25%	76.70%
6	Arkansas	PERS	Entry age	8.00%	4.00%	4.00%	74.00%
7	Arkansas	TRS	Entry age	8.00%	4.00%	4.00%	73.80%
8	California	PERS	Entry age	7.75%	3.00%	4.75%	60.80%
9	California	TRS	Entry age	8.00%	3.25%	4.75%	78.00%
10	Colorado	PERA	Entry age	8.00%	3.75%	4.25%	64.70%
11	Connecticut	SERS	Unit credit	8.25%	4.00%	4.25%	44.40%
12	Connecticut	TRS	Entry age	8.50%	4.00%	4.50%	61.42%
13	Delaware	SEPP	Entry age	8.00%	3.75%	4.25%	96.00%
14	Florida	FRS	Entry age	7.75%	3.00%	4.75%	86.59%
15	Georgia	ERS	Entry age	7.50%	3.00%	4.50%	80.10%
16	Georgia	TRS	Entry age	7.50%	3.75%	3.75%	87.20%
17	Hawaii	ERS	Entry age	8.00%	4.00%	4.00%	68.80%
18	Idaho	PERS	Entry age	7.75%	3.50%	4.25%	78.90%
19	Illinois	SRS	Unit credit	7.75%	3.00%	4.75%	37.40%
20	Illinois	TRS	Unit credit	8.50%	3.50%	5.00%	48.40%
21	Illinois	MRF	Entry age	7.50%	3.00%	4.50%	86.30%
22	Indiana	PERF	Entry age	7.00%	3.00%	4.00%	85.20%
23	Indiana	TRF	Entry age	7.00%	3.00%	4.00%	44.30%
24	Iowa	PERS	Entry age	7.50%	4.00%	3.50%	80.80%
25	Kansas	PERS	Entry age	8.00%	3.25%	4.75%	60.00%
26	Kentucky	KERS	Entry age	7.75%	4.50%	3.25%	38.30%
27	Kentucky	CERS	Entry age	7.75%	4.50%	3.25%	56.84%
28	Kentucky	TRS	Unit credit	7.50%	4.00%	3.50%	61.00%
29	Louisiana	SERS	Unit credit	8.25%	N.D.	N.D.	57.60%
30	Louisiana	TRSL	Unit credit	8.25%	3.00%	5.25%	54.40%
31	Maine	SRS	Entry age	7.75%	4.75%	3.00%	65.90%
32	Maryland	SRS	Entry age	7.75%	3.50%	4.25%	64.10%
33	Massachusetts	SERS	Entry age	8.25%	N.D.	N.D.	81.00%
34	Massachusetts	TRS	Entry age	8.25%	N.D.	N.D.	63.00%
35	Michigan	SERS	Entry age	8.00%	3.50%	4.50%	78.00%
36	Michigan	MERS	Entry age	8.00%	4.50%	3.50%	74.50%
37	Michigan	PSERS	Entry age	8.00%	3.50%	4.50%	78.90%
38	Minnesota	MSRS	Entry age	8.50%	4.50%	4.00%	90.69%
39	Minnesota	PERA	Entry age	8.50%	4.00%	4.50%	80.31%
40	Minnesota	TRA	Entry age	8.50%	4.50%	4.00%	81.87%
41	Mississippi	PERS	Entry age	8.00%	4.25%	3.75%	64.20%
42	Missouri	SERS	Entry age	8.50%	4.00%	4.50%	80.40%
43	Missouri	LAGERS	Entry age	7.50%	4.00%	3.50%	81.00%
44	Missouri	PSRS	Entry age	8.00%	5.00%	3.00%	77.70%
45	Montana	PERS	Entry age	7.75%	4.00%	3.75%	70.25%
46	Montana	TRS	Entry age	7.75%	4.50%	3.25%	61.53%
47	Nebraska	SERS	Entry age	7.75%	3.50%	4.25%	95.90%
48	Nebraska	CERS	Entry age	7.75%	3.50%	4.25%	94.70%

49	Nebraska	SPP	Entry age	8.00%	3.50%	4.50%	88.90%
50	Nevada	PERS	Entry age	8.00%	3.50%	4.50%	70.50%
51	New Hampshire	NHRS	Entry age	8.50%	4.50%	4.00%	58.50%
52	New Jersey	PERS	Unit credit	8.25%	5.45%	2.80%	52.80%
53	New Jersey	TPAF	Unit credit	8.25%	4.00%	4.25%	68.40%
54	New Mexico	PERA	Entry age	8.00%	4.00%	4.00%	78.48%
55	New Mexico	ERB	Entry age	8.00%	3.00%	5.00%	65.70%
56	New York	ERS	Aggregate	8.00%	3.00%	5.00%	93.90%
57	New York	TRS	Aggregate	8.00%	3.00%	5.00%	100.30%
58	North Carolina	TSERS	Entry age	7.25%	N.D.	N.D.	95.90%
59	North Carolina	LGERS	Entry age	7.25%	N.D.	N.D.	99.50%
60	North Dakota	PERS	Entry age	8.00%	4.50%	3.50%	73.40%
61	North Dakota	TRF	Entry age	8.00%	3.00%	5.00%	66.30%
62	Ohio	PERS	Entry age	8.00%	4.00%	4.00%	75.30%
63	Ohio	STRS	Entry age	8.00%	3.50%	4.50%	59.10%
64	Oklahoma	PERS	Entry age	7.50%	4.00%	3.50%	80.70%
65	Oklahoma	TRS	Entry age	8.00%	3.00%	5.00%	56.70%
66	Oregon	PERS	Unit credit	8.00%	2.75%	5.25%	85.80%
67	Pennsylvania	SERS	Entry age	8.00%	2.75%	5.25%	84.40%
68	Pennsylvania	PSERS	Entry age	8.00%	3.25%	4.75%	75.10%
69	Rhode Island	ERS	Entry age	7.50%	2.75%	4.75%	48.40%
70	South Carolina	SCRS	Entry age	8.00%	3.00%	5.00%	65.50%
71	South Dakota	SRS	Entry age	7.75%	2.80%	4.95%	96.30%
72	Tennessee	CRS	Entry age-FIL*	7.50%	3.00%	4.50%	90.60%
73	Texas	ERS	Entry age	8.00%	3.50%	4.50%	83.20%
74	Texas	TRS	Entry age	8.00%	3.00%	5.00%	82.70%
75	Texas	MRS	Unit credit	7.00%	3.00%	4.00%	82.90%
76	Utah	SRS	Entry age	7.75%	3.00%	4.75%	82.00%
77	Vermont	SRS	Entry age	8.25%	3.00%	5.25%	81.20%
78	Vermont	TRS	Entry age	6.25-9.00%	3.00%	3.25-6%	63.80%
79	Virginia	SRS	Entry age	7.50%	2.50%	5.00%	80.20%
80	Washington	PERS	Hybrid	8.00%	3.50%	4.50%	113.00%
81	Washington	TRS	Hybrid	8.00%	3.50%	4.50%	116.00%
82	West Virginia	PERS	Entry age	7.50%	3.00%	4.50%	74.60%
83	West Virginia	TRS	Entry age	7.50%	3.00%	4.50%	46.50%
84	Wyoming	WRS	Entry age	8.00%	3.50%	4.50%	84.60%
85	Milwaukee	City	Unit credit	8.50%	3.00%	5.50%	104.40%
86	Milwaukee	County	Entry age	8.00%	3.00%	5.00%	93.30%
87	Wisconsin	WRS	Entry age-FIL*	7.20%	3.20%	4.00%	99.80%

\*FIL = Frozen initial liability method

**Figure 12. 2010 Plan Interest Assumptions**



**Figure 13. 2010 Plan Funding Ratios**

